UNIVERSITY OF ILLINOIS

THE BUILDER

INCORPORATING

"ARCHITECTURE" and "THE BRITISH ARCHITECT"

VOL. CLXXVIII FEBRUARY 17, 1950 No. 5583

THIS WEEK'S NEWS

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LETHABY, WEBB AND MORRIS

EVEN in these anxious challenging and absorbing times it is good occasionally to glance backwards, not necessarily with the "longing, lingering look" of the poet, but inquiringly, with the object of assessing progress (if any); it is useful to see where we have come from even if there is more than a degree of uncertainty about where we are going. The practice at least has the merit of giving us the opportunity to praise famous men and to estimate the influence of their lives upon the course of later events. We therefore have particular pleasure in calling attention to the exhibition of work by W. R. Lethaby, Philip Webb and William Morris which opened at the R.I.B.A. yesterday, and to the paper on the same theme which Mr. Noel Rooke is to read at the Institute next Tuesday.

Lethaby, Webb and Morris probably had greater influence than any other three men on the course of architecture and the allied arts and crafts during the latter part of the Nineteenth Century. Morris, of course, is the most famous of the trio because of his ardent socialism, his distinction as a poet and the author of "News from Nowhere," and the leading part which he took in the revival and redirection of the arts and crafts. It is true that he had a year's experience of architecture in the office of George Edmund Street, but he soon found working drawings and quantities distasteful and turned instead to the designing of textiles and wallpapers. Philip Webb, one time chief draughtsman to Street (an office in which he was succeeded by Norman Shaw), was a close friend of Morris, with whom he was associated in the founding of the famous firm of Morris and Co., for which he designed much beautiful furniture; but he is probably best known for his part in what is called the "Queen Anne Revival," though the reason for this designation is far from clear, for his work shows little trace of the real Queen Anne style. His best-known work, "The Red House," at Bexley Heath, which he designed for Morris, is more romantic than classic in suggestion, with its pointed-arched entrance, diversified windows and steep-pitched roof. Webb was a thoughtful and unconventional designer and a man of the highest integrity, who consistently refused to fall below the level of his ideals, and with Ruskin and Morris he exercised an extraordinary influence over the social and political as well as the æsthetic outlook of the young Lethaby, who in the event was to prove a more potent force than any of the others in determining the course which architecture was to take.

Born in Barnstaple, in 1857, of humble parents, Lethaby, after serving in architects' offices locally, at Derby and at Leicester, came to London, and after winning the Soane Medallion in 1879 became a student in the R.A. School of Architecture. About this time Norman Shaw, already an A.R.A., engaged him as draughtsman and assistant. Here he remained for about twelve years, becoming, in an office which included Prior, Macartney, Newton and Horsley, Shaw's right-hand man. Although he designed a few buildings on his own account, notably Avon Tyrrell in the New Forest, a house in the Orkneys and some business premises in Birmingham, Lethaby was too sensitive a spirit for the rough-and-tumble of architectural practice. His real interest was in the study of mediæval architecture and in the minor arts and crafts, and no one took a more active and fruitful share than he in the Arts and Crafts

movement of the 'eighties. One of the chief results of this was the founding of the first Arts and Crafts School in Regent Street, now the Central School of Arts and Crafts, Southampton Row. Lethaby was its first Principal and afterwards was appointed first Professor of Design at the Royal College of Art, South Kensington. With his profound knowledge, keen enthusiasm and readiness to appreciate good work he had considerable success as a teacher, but his chief happiness came in 1906, when he was appointed Surveyor to Westminster Abbey. For twenty years he watched lovingly over the great church, studying its every detail, searching its archives and other records and writing luminously of its history and craftsmen. Readers may recall that *The Builder* had the privilege of publishing in serial form his remarkable work, "Westminster Abbey Re-examined" as well as, later, his life of Philip Webb.

But perhaps the most extraordinary thing about Lethaby is the change that took place in his outlook on architecture in the latter part of his life. His little masterpiece, "Architecture," in the main a brilliant analysis and summary of primitive, classic and mediæval art, ended with an eloquent plea for a modern architecture free from all historic influences. "Why," he wrote, "should we wish for a sham Jacobean house more than for a motor-car in the style of a Sedan chair?" Again: "The only agreement that seems possible is agreement on a scientific basis, on an endeavour after perfect structural efficiency. If we could agree on this we need not trouble about beauty; for that would take care of itself." And finally: "The modern way of building must be flexible and vigorous, even smart and hard. We must give up designing the broken-down picturesque which is part of the ideal of make-believe. The enemy is not science, but vulgarity, a pretence to beauty at second hand." Lethaby particularly disliked the Renaissance, and any modern work of that kind was anathema to him.

Except to his intimate friends Lethaby seemed aloof, but he was really a man of great sensitiveness and shyness. He carried the self-effacing principles of a lifetime to the extreme, refusing to have his name put forward for the Royal Academy and declining the Royal Gold Medal, as Ruskin and Shaw had done before him. Gifted draughtsman, inspiring teacher, sensitive designer and mediæval enthusiast though he was, he will probably be chiefly remembered as the prophet and advocate of a new modern architecture devoted to the service of the community. He died in 1927.

L'OPERA, PARIS. From a water-colour drawing by A. C. CONRADE.

BUILDING AS A CAREER

AT the present time when skilled labour generally is scarce, it matters very much to the building industry how it is pictured to the potential recruit and his parents. The fear of unemployment that once made it unattractive to entrants seems to be negligible for many years ahead, but much of the work has to be carried out in the open, often in some discomfort, and neither comfortable canteens nor "Music while you Work" can be guaranteed. Moreover, the average boy is more easily attracted by machines.

To neutralise various counter-inducements, building must be featured as an occupation which provides continual interest and reasonably good prospects. The anonymous authors of the Ministry of Labour's new pamphlet* have adopted this method of appeal, and in simple language have described how a building comes into being and what kind of workers are required. The last few pages deal faithfully with apprenticeship, technical studies, chances of promotion and conditions of life in the industry. "Building" is taken to include all the various building crafts, although nine subsequent pamphlets are promised to deal with separate crafts.

It seems that the present pamphlet is intended to serve as a general introduction to these others, rather than to attract personnel direct into executive positions *via* the drawing-office and the clerical side, though it is suggested that boys taking diploma courses and "apprentices who study for National Certificates in building usually hope to get junior technical or managerial posts after obtaining their qualifications and practical experience." The term "builder" generally implies a person who employs or directs building labour, though in country districts it is often applied to a working bricklayer. Near the end of the pamphlet, it is indicated that an able apprentice (to one of the crafts) may become a foreman in his own trade, or a general foreman, a clerk of works, a building inspector or sanitary inspector, a teacher in a technical school, or, finally, if he "is good at organising and planning" he "might set up his own business, with a few men to work for him," i.e., as a "master-builder." The whole emphasis of the pamphlet is, therefore, upon the importance of thorough training in one of the crafts.

Approximately half the space is devoted to a description of the work entailed in erecting a pair of bungaloid cottages of "traditional" materials, viz., brick walls, timber roofs covered with tiles, timber floors and bay-windows above which are small half-timbered gables. The scantlings of the timbers (or boards?) are not stated, but one fears the worst, remembering the new dining-cars that have been enlivened with ludicrous painted "half-timber" to celebrate the nationalisation of our railways. Apart from this questionable solecism, the isometric sectional drawing of the building is very clear, and it is the sort of house that the average suburban householder likes; perhaps the latest types of mass-produced house-building can hardly be considered an ideal field for training apprentices! The other numerous illustrations, all photographic, are excellent; and larger (commercial) buildings are briefly touched upon. The only reference to the most obvious drawback to building work is elliptical: "When the glazier has fitted glass to the windows, work can go on in all weathers." Nevertheless, "building is specially satisfying to boys who like to see the results of their work. . . . A worker can go back years later and point with pride to what he did in the past." The booklet should be in circulation among the senior forms of secondary schools.

*BUILDING (*Choice of Careers*, New Series, No. 2): issued by the Central Youth Employment Executive. H.M. Stationery Office. Pp. 24. 6d. net.

NOTES AND NEWS

Marine Architecture.

IT was good to hear Mr. J. M. Richards speaking on behalf of seaside architecture (with Brighton particularly in mind) in last Sunday's "Critics" programme of the B.B.C. Incidentally, this feature, with its wide cross-section of intellectual interest, is ably represented in the arts and architecture by either Mr. Richards, Mr. Christian Barman or Mr. John Summerson, Mr. Summerson also having periods of guiding the programme, and doing so with the utmost efficiency and grace.

Brighton, architecturally a much-lauded place, is none the less not everybody's ideal coastal town. True, it has a marine character, and, of course, its Regency work is probably finer than that of any town in the country, but the "London by the Sea" atmosphere, which necessarily carries with it a strident tempo particularly its own, somehow clashes with its Regency background. That this mixture of the garish with the authentic can be diverting is true, but it is, alas, only the core of Brighton—the cliff-like Regency terraces or the squares and narrow streets of the older town—that register as true marine architectural expression. Other towns—Weymouth, Sidmouth or such naval centres as Plymouth and Portsmouth—have basically a truer marine expression on account of their inhabitants' closer tie to the tradition of the sea.

Brighton, with some very creditable exceptions in the way of seaside architecture, has generally more of an urban quality, diverse and variegated, but over the years it is gradually losing the unique position gained in the time of the Prince Regent. That it still remains an impressive town few will deny; its giant sweep of water front alone is one of the finest sights on the south coast, but expansion into the larger Brighton, the twentieth-century scene at its worst, although making the fine core of the town even more valuable, has also largely obliterated the high quality of the town as a whole.

One must, however, be thankful for those terraces, the delightful squares and narrow streets; these will always constitute the true Brighton, the added amenities of this day and age being considered as something of a mistake, but somehow inevitable in the doubtful forward march of time.

Festival "Spread."

THE idea of using many of the existing bombed sites for exhibition purposes connected with the 1951 Festival, is worthy of notice if only on account of the possibility of making some of the cleared spaces look less dreary than they have done for the past five years.

The idea came from the so-called Amenities Council, which has as its chairman Professor A. E. Richardson, R.A., the reason being that the site on the South Bank may well prove too small to hold the many trade displays. In itself the idea seems reasonable enough, although the possibility of losing coherence with the South Bank centre must not be lost sight of; but even this need not be harmful to the cause if the general treatment of the sites has some relationship. At least, we may look forward to the time when that particularly depressing clearance which we have to pass every morning and evening, and which for long has served as a rubbish dump for the neighbourhood, will be cleared.

Learning from Others.

WIDELY DIFFERING OPINIONS are held (perhaps even among architects) on the acceptance in Britain of certain ideas and practices which owe their origin to the U.S.A. The most common, of course, are particular types of films, journalism and music. What benefits, if any, we have derived from these are not so important to us at this moment as the benefits which should result if British architects take heed of what Mr. Michael Waterhouse, president, R.I.B.A., has said about the method adopted by American architects of planning every job down to the last detail before any building work begins, and then adhering strictly to the prearranged programme. If all building in Britain were conducted on this basis we would, undoubtedly, be a step nearer efficiency.

Students who listened to Mr. Waterhouse's address had an opportunity later of studying typical plans, prepared by American architects, which showed an extraordinary amount of detail.

At the same meeting, the highlight of which was the distribution of R.I.B.A. prizes and studentships, a very impartial but searching critique of students' designs was given by Mr. Maxwell Fry, F.R.I.B.A. His task was not an enviable one, for his audience was composed not solely of students but included many experienced architects. He handled the situation remarkably well, however. It must be a great temptation, on occasions of this sort, to the student who listens to a critic questioning the reasons for the inclusion of various details in the design, to reply to the critic point by point. Maybe the R.I.B.A. council will consider this. It would make an interesting evening.

Students in Revolt.

THE Architectural Students' Association occasionally issues a magazine called *Plan*. No. 6, which has just reached us, is devoted to "building, architecture, education" (in that order and without any capitals). In taking up a students' magazine one must always be prepared for the possibility of facetiousness, and in the present case our suspicions were aroused by some blank verse printed inside the front cover, which urges the reader to "think back to childhood" and to recall how he broke a clock and "the spring unfurled lay lifeless in your hand." Facing these lines is a whole-page illustration of a small boy holding a spring which appears to have been ravished not from a clock but from a spring mattress! Presumably the humour is unintentional, for this is followed by a spate of morbidly pessimistic prose, which is certainly no joke. The burden of the plaint, as much political as technical, is that in this country "chaos is complete"; building, architecture and education have all "failed." The architect, contrary to general belief, is a destroyer. "The architect destroys the ground. He destroys the materials. He destroys people" (p. 7). Builders and teachers, if not so destructive, are a doubtful lot. The contemporary picture, as the students see it, is one of intense gloom, relieved by a faint gleam of hope—*i.e.*, architects working in groups in the design of buildings consisting of mass-produced components "which can be fitted together in a great variety of ways."

In the second part of the magazine some account is given of school building carried out on these lines by the Architects' Department of the Hertfordshire County Council, and we do not suggest for a moment that this is not excellent of its kind, though it is not here shown to any great advantage. Strong emphasis is laid by the students on the virtues of the group system, and we are assured that "the word 'architect' will come to be a symbol for a group of men entering into a relationship from which the form of shelter emerges." Rather vague, but the outlook for the private practitioner is apparently none too rosy.

Group Editing.

"YOUTH will have its fling," and conversely must be allowed its moods of depression. We do not take *Plan* too seriously, but a few words of friendly criticism may not be amiss. Forgetting the gloom (which the students will, no doubt, shake off as they grow older) and coming to the format of the magazine, it must be said that this, though original enough, is rather trying. The three principal features, as we have indicated, are chapters on building, architecture and education, and these, instead of following on in the normal way, run simultaneously, the pages being divided into three horizontal strips. As the editors explain, these may be "read in the usual way (*i.e.*, vertically down the pages)" or "separately as a horizontal section." They can also be read backwards or even upside down if the reader cares to put himself to the trouble, or even not read at all. The frequent changes in size and measure of type are also rather distressing. This number of *Plan*, we are told, is the work of a group of 15 students, and if it is to be taken as an example of the group system as applied to magazine editing, few will be able to resist the conclusion that there is still something to be said for old-fashioned individualism. Perhaps the editors will do better next time; and may a little cheerfulness be allowed to break through.

Foreign Scholarships for British Students.

THE British Council has been asked to find candidates for scholarships which are being offered by 14 foreign governments and universities for the year 1950-51. Most of the scholarships provide for a year's post-graduate study and correspond to scholarships offered by the British Council. Those countries which are continuing schemes already in operation are: Belgium, Czechoslovakia, Denmark, Finland, France, Germany (Universities of Cologne and Munster), Italy, the Netherlands, Norway, Persia (University of Teheran) and Sweden. Three new scholarships each valued at £640 are offered by Brazil and the University of Neuchatel, Switzerland, is offering one.

The closing date for applications is March 10, and the awards will probably be announced by the beginning of the university summer term. Details of these scholarships are contained in a booklet issued by the British Council and obtainable from: The Controller, Education Division, The British Council, 3, Hanover-street, W.1.

R.A. Summer Exhibition.

THE ROYAL ACADEMY Summer Exhibition opens at Burlington House on Saturday, April 29, and closes on Monday, August 7. Days for receiving work are:—

Water colours, etc., and architectural drawings, Friday, March 17; oil paintings, Saturday, March 18, and Monday, March 20; sculpture, Tuesday, March 21. Hours for the reception of works are 8 a.m. to 7 p.m., except Saturday, March 18, 8 a.m. to 3 p.m. Works (which must not exceed three by any one artist) must be delivered

at the Burlington-gardens entrance. Labels and forms obtainable on and after February 20 from the Secretary, Burlington House, W.1, on receipt of a stamped addressed envelope.

R.I.B.A. Diploma in Town Planning.

MR. LESLIE V. MITCHELL, A.R.I.B.A., and Mr. Robert G. H. Turnbull, A.R.I.B.A., having passed the qualifying examination, have been awarded the R.I.B.A. Diploma in Town Planning.

Professional Announcements.

MR. WINSTON WALKER, F.R.I.B.A., A.A.Dipl., has recently relinquished his post as senior assistant in charge of architecture at the Hammersmith School of Building. He will continue to practise from 107, Sloane-street, S.W.1 (Slo. 1410). He will continue his private coaching sessions for preparation for the final design examination of the R.I.B.A., and the criticism of testimonies, etc. The next session commences on March 13.

MESSRS. B. STEVENS AND PARTNERS, chartered architects and surveyors, 31, Cornfield-road, Eastbourne, have now opened an office at 49, Havelock-road, Hastings, where they will be pleased to receive trade catalogues.

The partnership between MR. GUY HERBERT NICHOLLS and MR. WILLIAM ROWLEY HALL, chartered and registered architects and surveyors, at 66a, Wigmore-street, W.1, under the style of Nicholls and Hall, has been dissolved by mutual consent as from February 2. Mr. Nicholls, who has undertaken to wind up the business affairs of the partnership, will in future practise from the same address under the style of Guy H. Nicholls, and Mr. Hall in future will practise in his own name from 264, Baring-road, Grove Park.

MR. JOHN E. CROWTHER, A.I.A.S., corporate quantity surveyor, 16, Gildredge-road, Eastbourne, announces that he has opened new offices at 12, Bessborough-gardens, Westminster, S.W.1 (tel.: Victoria 5571), where he will be glad to receive trade catalogues, etc.

COMING EVENTS

Monday, February 20.

FEDERATION OF MASTER BUILDERS.—Lunch and A.G.M. Connaught Rooms, Great Queen-street, W.C.2. 1 p.m.

Tuesday, February 21.

R.I.B.A.—"The Work of Lethaby, Webb and Morris" by Mr. Noel Rooke. R.I.B.A., 66, Portland-place, W.1. 6 p.m.

HOUSING CENTRE TRUST.—"The Communist Party's Policy on Housing," by Mr. C. N. Craig, A.R.I.B.A. 13, Suffolk-street, Haymarket, London, S.W.1. 1.15 p.m.

Wednesday, February 22.

ARCHITECTURAL ASSOCIATION.—"The Architect's Brief," by Sir Thomas Bennett, F.R.I.B.A., 34-36, Bedford-square, W.C.1. 8 p.m.

L.M.B.A. (SOUTH-WESTERN AREA). — "The Work of the Building Centre," by Mr. R. Nott. Zeeta's Bridge Restaurant, Kingston-on-Thames. 2 p.m.

INSTITUTE OF WELDING.—Luncheon. Café Royal, Regent-street, W.1. 12.30 p.m.

INSTITUTION OF ELECTRICAL ENGINEERS.—Annual dinner. Connaught Rooms, Great Queen-street, W.C.2. 7 p.m.

Friday, February 24.

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS.—24th anniversary dinner-dance, Mayfair Hotel, Berkeley-street, W.1. 6.30 p.m.

INSTITUTION OF STRUCTURAL ENGINEERS.—Ordinary meeting. 11, Upper Belgrave-st., S.W.1. 5.55 p.m. (postponed from February 23).

BIRMINGHAM AND FIVE COUNTIES ARCHITECTURAL ASSOCIATION.—Annual dinner and dance. Grand Hotel, Birmingham.

FROM "THE BUILDER" OF 1850

Saturday, February 16, 1850.

FULHAM UNION WORKHOUSE.—It will be remembered that designs for this union house were obtained in competition, and that on the selection of a plan by the guardians unaided, some articles appeared in our pages, pointing out the error they had fallen into, and the injustice committed. If the guardians had listened to us, they would have saved themselves much mortification, and the parish a large sum of money. The mess they are now in surpasses belief. We shall probably give particulars as a warning to other boards.

R.I.B.A.

Final Examination Results

The Final Examination of the R.I.B.A. was held from November 30 to December 9, 1949. Of the 358 candidates examined, 175 passed as follows :

WHOLE EXAMINATION

Henry Abbott (Caenarvonshire), G. G. S. Ames (Widnes), B. L. Anderson* (Hull), B. G. Andrews* (Cheltenham), D. J. Appleby* (Brentwood), L. G. Armstrong* (Westcliff-on-Sea), D. B. Bailey (Bristol), J. D. Bailey (Belfast), Kenneth Baldwin (Dist. in Thesis) (Brighouse), Alfred Ball (London, S.W.9), B. S. D. Berger (London, N.2.), D. V. Bernhardt* (London, S.W.11), M. R. Blampied* (Burnham), B. W. Blanchard* (Hull), E. S. Boswell* (Gravesend), M. A. Brimicombe (Mrs.) (London, S.W.7), H. D. R. Buck* (London, W.8), J. E. Bull (Bristol), J. A. Burrell* (London, E.13), J. R. W. Carman (Beeston), E. G. Chatton (Stockport), E. J. Cheeseman (Carshalton), D. G. Clarke (Bath), Harry Clarkson* (Widnes), E. A. Cummings* (Glasgow), P. M. Cunnington (Miss) (Dist. in Thesis) (London, S.E.5).

N. J. Dixon (Twickenham), G. B. D. Dodd (Southport), D. B. Doe (Oakham), N. C. Dowell* (Leicester), P. D. Duffy* (London, S.W.16), G. S. Englefield* (Harrow), D. T. F. Falkus* (Upper Warlingham), E. R. Fleming* (Altrincham), John Foster* (Boston), M. C. Froud* (Parkstone), G. G. Furness* (Huddersfield), Roy Gardner (York), S. G. Garrett* (Cambridge), Kenneth Gleaves* (Stoke-on-Trent), L. H. Gooday* (London, S.W.15), J. K. Graham* (Belfast), K. J. I. Greenslade (Bristol), P. B. H. Gundry* (Wembley Park), G. F. Gutteridge (Dist. in Thesis) (Southampton).

Maya Hambly (Miss) (London, N.W.1), G. G. W. Hammond (Bristol), M. E. Hanna* (London, S.E.26), H. L. W. Harris (Worcester Park), R. E. G. Harrison* (Bexhill-on-Sea), Noel Hastilow* (Birmingham), D. N. Heath (Stoke-on-Trent), Arnold Hesford (Manchester), R. A. Hewish* (Orpington), P. B. Hollins (Dist. in Thesis) (Grays), G. L. Hothersall* (London, S.W.20), D. W. Insall (Dist. in Thesis) (Bristol), Alan C. Jones* (Blackpool), David H. Jones* (Liverpool), F. J. Keen* (Stoke-on-Trent), T. F. Kerr (Co. Down), M. S. Kharkar (Hounslow), D. F. Lambeth (Burford), John Law* (Preston), Arthur Little (Dist. in Thesis) (Manchester), Henry Longville (Sunderland), F. C. McEwen (Gateshead), H. W. McLean (Brighton), G. R. M. Macmanus (London, S.W.11), W. M. R. McMenan (Glasgow), D. G. Manning (Dist. in Thesis) (Shenfield), J. W. Marflitt* (Hull), C. M. Measday (London, S.W.9), D. J. Middlebrook* (Kirkella), P. G. Miller (Dist. in Thesis) (West Molesey), J. H. Mitchell* (Ewell), R. L. Moorcroft (Gatley), David Morris* (Bristol), P. G. Mowbray* (Preston), H. C. Murrell*(Torquay), P. K. Nicoll* (London, S.W.10).

M. H. Peck* (London, S.E.13), G. M. Pegg* (Gt. Yarmouth), J. R. Poole (Miss) (Dist. in Thesis) (London, S.W.3), R. E. Poole (Weston-super-Mare), C. H. Prodgers* (Northfleet), D. N. Purkiss* (Saffron Walden), J. M. Ramsay* (Hadley Wood), P. J. Reynolds (Oxford), S. G. Rich* (Hailsham), Frank Robinson* (Manchester), L. D. Rooker (Hull), Jerrold Rostron* (Rugby), J. S. Rowe (Shrewsbury), R. L. Sawyer (York), E. F. Scadding* (Birmingham), L. S. B. Scales* (London, S.W.16), J. F. Sheldon (Dist. in Thesis) (Twickenham), W. A. Shirbon* (Hull), Peter C. Smith* (London, S.W.16), Stanley F. Smith* (London, N.W.2), A. E. Souter (London, N.W.2), S. D. T. Spittle (Dist. in Thesis) (Cambridge), Ferguson Sprott (Bangor, Co. Down), R. C. T. Steel (Staines), Thomas Steele* (Carluke).

D. L. Tatnall (Ilford), I. A. T. Taylor (Cheltenham), John Taylor* (Truro), John Taylor* (Barkingside), D. B. Thorpe* (Newport, Mon.), S. E. Todhunter (Miss) (Dist. in Thesis) (Carshalton Beeches), J. McK. Tough (Miss) (Edinburgh), Geoffrey Turner (Sutton-in-Ashfield), R. E. Turner* (London, E.4), R. P. Walker (Southport), Ronald Watkins* (Cardiff), D. H. R. Watson (Shoreham-by-Sea), L. H. Watson* (London, N.1), Barbara A. Wills (Miss) (Bath), W. E. Wilmshurst* (New Malden), D. A. Wren (London, S.W.7), R. O. Wynne-Williams* (London, S.W.2), D. C. Yates* (Brockworth), and D. G. Yeatman (Lower Kingswood).

* Subject to approval of Thesis.

PART I ONLY

T. D. W. Astorga (Timperley), Zygmunt Borowiecki (London, S.W.15), R. L. Brewerton (Wilmslow), John G. Brown (Bexleyheath), A. S. Burn-Hill (Rye), D. H. P. Clarke (London, E.17), M. J. Clayton (Southsea), Malcolm Cooper (Timperley), Gerald Corne (Cardiff), G. E. Crane (London, E.4), Ferdinand Elter (London, E.1), D. M. Fidler (Manchester, 8), Anna Gorska (Mrs.) (London, W.12), N. B. J. Hall (Ilford), A. E. Head (London, S.W.8), R. L. Head (London, N.15), Adam Hewanicki (London, S.W.12), B. M. Hewitt (Portadown), D. B. Hill (Manchester), D. J. Hogarth (Wembley Park), J. W. Jakubowicz (London, W.2), H. G. Katten (London, N.4), P. H. Knight (Sutton), K. Krasuski-Wczelik (London, S.E.23).

D. R. Leaker (Plymouth), J. M. Lech (Worcester Park), C. W. Noble (Kingston-upon-Thames), J. A. O'Gorman (Dublin), J. A. Partridge (London, S.E.12), Lech Piatkowski (London, W.8), A. M. Preston (Flixton),W.K. Przybylski (London, S.W.10), C. B. Ratcliffe (Altrincham), P. T. Renninson (Preston), D. F. Richards (London, W.5), P. S. Russell (London, S.E.9), W. D. Shepherd (Findern), W. R. Solomon (Plymouth), J. V. Spencer (Manchester), Henryk Starczewski (Birmingham), A. T. J. Stokes (London, E.10), D. T. Stott (Rochdale), G. G. Tomlinson (Handforth), H. V. Walker (Willaston), Janet P. White (Miss) (Surbiton), June Whittenbury (Miss) (Manchester), E. J. J. Williams (Ilford), J. F. Williamson (Blackpool), L. M. Young (Buckhurst Hill), and Karol Zawilski (London, W.14).

THE SPECIAL FINAL EXAMINATION

The Special Final Examination was held from November 30 to December 9, 1949. Of the 349 candidates examined, 122 (21 in Part I only and 3 in Part II only) passed. The successful candidates are as follows:—

WHOLE EXAMINATION

T. T. Allan (Glasgow), H. G. Ashton (Chelmsford), D. H. Bamber (Blackpool), E. E. Bannington (Solihull), Sidney Beesley (Sutton), D. C. Begbey (Beckenham), A. J. Bicknell (Romford), F. L. Birch (Walsall), Geoffrey Bloor (Liverpool), J. L. Boak (Perth), C. M. Bollon (London, S.W.18), Thomas F. Brown (Chester), D. S. Bruce (Glasgow), J. G. Bruce (London, S.E.13), A. L. Cavanagh (Manchester), G. M. Crockett (Dublin), J. K. Dancer (Stourbridge), G. I. Davies (Newport, Mon.), A. C. Day (Manchester), A. H. Donnan (Dorchester), A. J. Dyer (West Wickham), Arthur Fairbrother (Oldham), H. C. Farrow (Bromley), R. F. S. Fenton (Southend-on-Sea), J. A. Ford (Surbiton).

H. H. A. Gallagher (Biggin Hill), Avshalom Grinshpon (London, N.W.3), W. P. Guard (Co. Dublin), L. G. Hemmings (Bromley), J. A. Henley (Hereford), T. E. F. Henry (London, N.4), C. L. Howell (London, S.E.21), Ernest Humphrey (Purley), S. C. Hunt (Chelmsford), J. L. T. James (Cardiff), W. P. Johnstone (Stranraer), A. P. Josephides (Richmond, Surrey), A. C. Judges (London, E.C.4), P. E. Kerr (Bristol), Francis Kerr-Lucarotti (London, N.12), D. W. Killeen (W. Croydon), R. A. B. Kind (Shrewsbury), G. A. Kirby (London, S.W.16), L. P. Knight (Glasgow), R. A. Laker (Guildford), A. H. Langston (Huntingdon), T. W. Lawton (Long Eaton), N. W. Lee (London, N.W.8), E. V. Leece (London, W.9), F. H. Lloyd (Luton), N. R. Macgovern (Co. Wicklow), Joseph Mendleson (London, W.4), A. M. Mitchell (Wakefield), E. F. Moholi (Edgware), E. A. Mountford (Stoke).

K. S. O'Connor (Trinidad, B.W.I.), W. J. Oliver (Thundersley), A. B. Owles (West Drayton), J. E. Parsons (London, W.7), D. W. Pearce (Dorchester), G. G. Penbery (Kingston-on-Thames), Czeslaw Perzanowski (Knebworth), W. S. Philp (Ipswich), J. T. Pinion (Hertford), R. W. J. Polkinghorne (London, W.2), H. O. Roberts (Coventry), P.McD. Robertson (Edinburgh), G. W. A. F. Rye (Maidstone), B. C. Sharp (London, N.21), J. J. Sharp (Solihull), E. S. Skingsley (East Horsley), R. E. M. Slater (London, S.E.21), John E. Smith (Leicester), A. H. Smithurst (Nottingham), William Snowdon (Newcastle-on-Tyne), K. G. Sparrow (Maidstone), S. L. G. Stacey (Tonbridge), Kenneth Steen (Sawbridgeworth), C. C. Steptoe (East Croydon), Reginald Stevens (Derby), D. W. Stoneham (Luton), H. B. Stones (New Barnet), B. T. K. Suthar (Baroda, India), M. V. D. Swarbrick (Aldershot), G. R. Taylor (Aldershot), R. A. Thomas (Ilford), W. D. Topping (Sunbury-on-Thames), F. D. Tugwell (Christchurch), J. B. Tunstill (Bridlington), Victor Uren (Exmouth),

Allan Wainwright (Stockport), Kenneth Waite (Richmond, Surrey), James Walker (Birmingham), J. A. Wardley (Huntingdon), D. W. Watts (Buckhurst Hill), C. C. Wilkie (London, S.W.5), C. L. Williams (Congleton), and C. Woodward (Purley).

PART I ONLY

D. J. Arnold (London, N.W.4), Walter Bor (London, S.W.1), W. T. Boyd (Huddersfield), David T. Brown (Perth), S. J. Bull (Kilmarnock), John Carmichael (Motherwell), George Chamberlain (Shrewsbury), L. G. C. De Lara (Poole), E. H. Eames (East Barnet), S. N. Economou (London, N.W.3), J. E. Elliott (London, W.7), V. H. Hazelwood (Twickenham), J. A. K. Hope (London, N.W.11), J. C. Howlett (London, N.16), A. G. Kirk (Heanor), J. E. Parker (Tadcaster), L. G. Rogers (London, N.6), Tadeusz Rytarowski (London, S.W.17), J. H. Snowden (Chester), S. E. Southgate (London, N.16), and Charles Toner (Edinburgh).

PART II ONLY

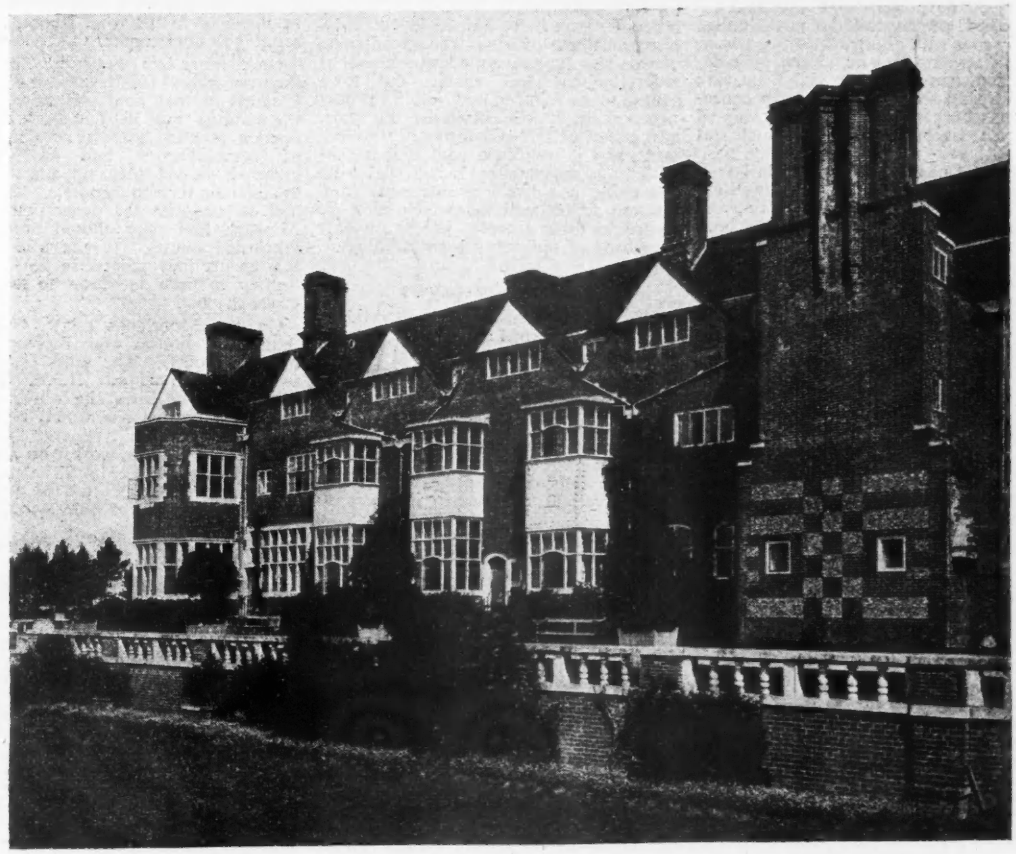
J. V. Henry (London, S.E.22), C. F. Pettit (Kingston, Surrey), and A. E. Wallis (Ipswich).

The following candidates have also passed the Special Final Examination :

S. F. Collins (Oxford), T. W. G. Lewis (Bristol), K. G. Pert (Wickham Market), R. M. Soltynski (South Africa).

THE EXAMINATION IN PROFESSIONAL PRACTICE FOR STUDENTS OF SCHOOLS OF ARCHITECTURE RECOGNISED FOR EXEMPTION FROM THE R.I.B.A. FINAL.—The successful candidates were as follows :

Miss E. M. Caldecott (London, W.8), D. E. Chapman (Twickenham), O. R. Dennis (Manchester), G. C. Jackson (Carnforth), D. S. Menzies (Paisley) E. G. Moodie (Glasgow), D. E. Page (Chesham-Bois), R. T. Simpson (Gateshead), and L. A. Lauwers (Ostend).



AVON TYRRELL, HAMPSHIRE. The late W. R. Lethaby, Architect. (*See page* 219.)

THE HOUSING MANUAL, 1949

Discussion at the Housing Centre

THE 1949 Housing Manual was the subject of a discussion at the Housing Centre, London, on January 31, in which the principal speakers were MESSRS. M. B. BLACKSHAW, M.A., A.R.I.B.A. (Ministry of Health), J. OWENS, F.R.I.C.S., M.I.Mun.E. (City of Bath), and G. BLAIR IMRIE, F.R.I.B.A. Following are extracts from their remarks.

Opening the discussion, MR. BLACKSHAW began by considering the question of layout and grouping. He said:—

This subject is dealt with fairly thoroughly in the Manual partly because it was necessary to define the position of the housing authority *vis-à-vis* the planning authority as a result of the passing of the Town and Country Planning Act, 1947, and partly because the good layout and grouping of buildings is the first prerequisite of good development. It seems to me that we are at present going through a transitional stage (and incidentally taking an infernally long time about it) to break away from the old Beaux Arts tradition of monumental layouts composed of geometrical and trigonometrical patternings. When we look at reasonably up-to-date ordnance sheets showing inter-war residential developments, we must all be struck by the monotonous use of the same geometrical shapes which, even looked at as a two-dimensional composition, leave much to be desired. Even worse is the third dimensional aspect of the matter when these geometrical patterns are applied, as they often were, to unsuitable terrain.

I myself have seen some wretched examples of geometrical layouts applied to hilly sites with disastrous consequences, both in appearance and in the high development costs incurred, and I am sure you have all seen the same. An endeavour has been made in the new Manual to give a vigorous prod to despatch this type of layout to the limbo of the past. The essence of the new thought in layout is to integrate the houses and dwellings with the landscape and the terrain, and once a satisfactory composition has been achieved, to align the roads to serve them. This is a far more difficult process than the old method since it involves a more detailed study of the features and possibilities of the site, of the contours, of the trees and hedges, and consideration of the appearance of the completed development both from within and from outside the boundaries of the estate. Only by studying the problem in this way can the whole development become a fitting architectural composition. It is no use in the future to consider the house only as a subject for architectural treatment.

It is for the above reason that great stress is laid in the Manual on the importance of seeing that the layout, the grouping and the design of the houses are in the hands of a single person who must be a trained designer. To divorce these two subjects is, in my view, the surest way to destroy that unity and harmony which is the first prerequisite of a successful composition.

Misconceived Variety.

A further section of the Manual sets out to emphasise the need to create interest, character and unity in the grouping of buildings. This is a very difficult subject and needs a refinement of skill and study to achieve a successful solution. It is often thought that interest is maintained by variety and that variety also is a means of avoiding monotony, but this is not true, because dreadful monotony and chaos and lack of unity can be the outcome of misconceived variety, as has been so ably demonstrated in the booklet called "Houses we live in." There is no time to go fully into this important subject this evening, but the Manual seeks to show by way of text and photographs of models what can be done in this direction by considering the street, part of a street or group of buildings that can be seen at one time as a unit of design and by pointing out the possibilities of creating interest and character in the street scene by the friendly inter-relation of terraces and groups of houses and dwellings of varying heights, shapes and design.

The second point that I wish to mention is the provision of new types of accommodation. In the Building Exhibition of 1947, the Ministry of Health exhibited plans of a three-storey terrace house which attracted comment and formed the subject of an interesting discussion here at the Housing Centre. This was followed by a full-scale example at the Ideal Home Exhibition in 1949 which was very favourably received. Partly in consequence of this and because of other factors, the three-storey terrace house finds an important place in the new Housing Manual.

We believe that this type of house has a useful function to perform particularly in schemes of redevelopment where fairly high densities are proposed. The three-storey terrace house with its small private garden provides suitable accommodation for large families with children who would otherwise have to be housed in the hurly-burly of blocks of flats. The introduction of this new type into modern schemes of redevelopment will enable the town square to be reintroduced with its proper urban scale, it will emphasise the many advantages of terraced forms of development, and if combined with high blocks of flats or maisonettes, it will enable an interesting and lively architectural composition to be achieved which must be denied to those schemes which are only composed of uniformly high buildings.

Cost to Ratepayers

MR. OWENS, who spoke next, said he was really concerned not with the Manual as a whole, but with its practical application in the cost to the ratepayer and in rents to the people who were going to live in the new houses. It was all very well to produce a Manual such as the present one, and say that it got an enthusiastic reception; but did people read the Manual? His own experience was that councillors did not clearly interpret its meaning.

He thought the Ministry was to be congratulated on the new Manual. The recommendations as to space standards and super areas of various types of houses were good, and none would quarrel with the general advice given on house design, site planning, layout and landscaping, etc. But there were one or two points which rather puzzled him.

In passing he would like to say that for the first time the Ministry had made a brief reference to houses for the higher income groups. These people had been deserving attention for the past five years, and the need for this type of house was as acute as for any other type of dwelling if the general problem of housing shortage was to be overcome. He was not so certain that this need should be met by the local authorities. His own view was that it would pay any local authority to provide land with roads and sewers, retain the freeholds, and let people loose to build their own houses.

The two layouts illustrated in the Manual presupposed level sites. They were excellent from the academic point of view, though he could not understand why it should be necessary to have any high blocks of flats in outer ring development. There was plenty of scope for obtaining rhythm, harmony and variety without the introduction of this beehive way of living which was out of harmony with the British way of life. None could say that this form of existence contributed to a better life, and he could see no justification for introducing these contraptions in outer ring development. Good grouping of bungalows, two-storey houses and a few three-storey terraces could provide all the variety necessary.

Use of Local Materials.

He emphasised the importance of the proper recognition of a material which characterised a district. Bath, for instance, consisted of stone buildings. The town was in a basin, and the building sites were situated on the hill sides, so that everything built was seen by everyone.

Since the war, 1,815 houses had been erected. Of these, 505 were traditional, 309 of them being in Bath stone. There were 600 temporary bungalows, and a mixed bag of 710 non-traditional houses —steel, and two other types. One of the sites was laid out when the Bath Plan was made. When it was finished, and the roads completed, the council had had to accept a mixture of steel and two other types of house. Adjustments had had to be made to fit the road layout, and the result was unfortunate.

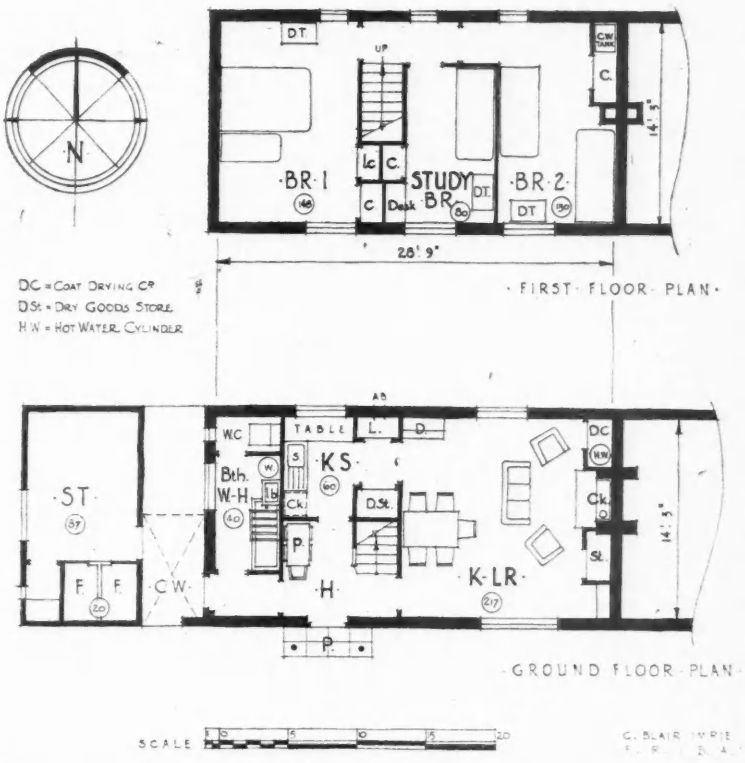
On another site they were developing the stone houses illustrated in the Manual. Progress at that time was slow because the building trade itself had not begun to operate properly after the war; the rate of demobilisation and shortages of materials slowed things up, and the estate took a long time to complete. Then they had to consider the suggestion of the Ministry that they should accept prefabricated houses. It was true that by this means they gained in time, but he wanted to draw attention to the differences in cost.

On the Moorlands estate, traditional Bath stone houses were developed with open forecourts. The gross cost of the two-bedroom type was £1,328. This included £95 for extra site work, and the cost on a normal site would be £1,233. The three-bedroom type cost £1,411 including £95 for site works; on a normal site it would be £1,316. The extra site work varied from £95 to £163 per house, and the extra cost for Bath stone over an acceptable brick or rendered concrete varied from £78 to £84 per house. So it would be seen that in Bath they started off with an additional expenditure of about £200 above the normal.

Effect on Rents.

On another, less undulating site, they had prefabs, for which a capital grant on the cost was allowed. The two-bedroom houses cost £1,320, and the three-bedroom ones £1,440. On that particular site, only £55 were required for site works. If they had built traditional houses here, the cost would have been £1,193 and £1,289 for two- and three-bedroom houses.

The gross cost of the steel houses had been £1,870 for a three-bedroom house,



which included an average of £105 for site works, and on a normal site the cost would have been £1,765. Traditional houses could have been built on that site for £1,434 gross, so that £436 per house could have been saved. To be fair to the steel house, he must admit that a capital grant of £250 per house had been made, so that the net saving would have been only £186. Mr. Owens ended by saying that all these high costs for site works were reflected in the rents.

The Architect's Problems

Referring to the Ministry of Health's method of using floor area costs as a basis for assessment of house tenders, MR. IMRIE said: This yardstick has put a premium on the larger house and perhaps on wasteful planning, with attendant increased capital cost. It is obvious that a small, compactly planned house with good equipment will cost more per superficial foot (even though it is less in total cost) than a house of larger floor area not so well planned and equipped.

The result is that a house designed to fulfil practical requirements at a reasonable capital cost must often be replanned, sometimes from scratch, to comply with this artificial condition of cost computation. Knowing this, the architect has been in two minds: on the one hand he desires an economical plan with low capital cost, and on the other he is tempted to increase floor area to fit the yardstick. If he desires to suit the yardstick the cost tends to go up. I believe that total cost can be reduced if a better yardstick could be devised.

Everyone who has been engaged on housing has had a heartbreaking struggle in trying to keep costs down, as every saving we have made has been countered by increasing costs outside our control. We have reached the safe limit in economies in quality and essential equipment; it therefore seems to me obvious that there must now be a substantial reduction in overall sizes, without materially lowering essential standards.

M.O.H. Achievements.

After saying that he appreciated what the Ministry of Health had done in such a short time to raise the general quality of local authority housing, the speaker continued:—

What matters most in a plan is usable living space properly disposed, and not overall size, and I suggest that we can provide sufficient living space properly disposed within total areas far less than those the new Manual recommends. I also suggest (and I think the doctors will agree) that a small well-planned, warm and dry house is better than a large cold one.

It is therefore necessary that we should do all we can so to design the required living space that it practically fills the total ground area of the house. Cut out every bit of wasteful traffic space and unusable areas, so that, while retaining an adequate amount of living-space we can plan it in a house of less than the 900 sq. ft. or more now suggested. I hope to convince you that a saving of about 20 per cent. can be made.

Many will have noticed that Fig. 19 in the 1949 Housing Manual has 761 sq. ft. for four persons, while Fig. 20 calls for 945 sq. ft. for five persons, a difference of 184 sq. ft. This is equivalent to saying that one extra person necessitates space sufficient to provide another bedroom of 14 sq. ft. and a sitting-room of 110 sq. ft.

Comparison of these type plans also seems to suggest that the rural worker requires more living space than his urban cousin. If you look again at Fig. 19 you will see that a four-person rural house requires a ground-floor living and working space of 299 sq. ft. and two w.c.s, when the good six-person flat, shown in Fig. 61 only requires 290 sq. ft. of living space and one w.c. I consider that the area provided for the urban flat is sufficient for the rural worker's house, and that a modified working kitchen type, which has no parlour, suits the countryman as well as the townsman.

The Sitting-Room Problem.

The desire for a best room is very real and understandable, but I feel sure that if the choice is between the large house with a parlour and a smaller house which is more comfortable, easier and cheaper to run, and with a lower rent, then there will be a majority who will be willing to give up their sitting-room. I think, however, that if the occupiers could afford a parlour it would probably be used more in the future for study. Now that our young people are to have better opportunities for good education, I think that there should be a place where a school child with homework, or the studious adult, can work in comfort and away from the distraction of the comings and goings of the ground floor. Therefore, if the parlour is to go, I think that one of the bedrooms (preferably the smallest, as it will be easier to warm) should be designed as a study-bedroom.

I suggest, therefore, that we should omit the parlour and make the normal living-room the maximum area which can be heated by radiation from one normal appliance—about 200 sq. ft.

There is a further saving of space which I also believe to be an improvement in convenience and which will save building cost. I refer to the combining of the bathroom and the wash-house. I know from experience that many housing committees would, at first sight, condemn this idea as retrograde, but I know also from experience that on balance it adds greatly to the comfort and convenience of the housewife, and that most countrywomen, having got over the novelty, would not change to the upstairs bathroom and that barbarous arrangement, the outside washhouse which, I am sorry to see, is suggested in three out of the six rural types in the Manual.

THE LATE MR. H. B. BRYANT

WE announce with regret the death, after a short illness, of Mr. H. B. Bryant, Clerk to the National Joint Council for the Building Industry. He was 61.

After service in the first war he became a housing inspector for the Ministry of Health, then in 1929 he first became connected in an official capacity with the various representative organisations of the building industry. It was in that year that there came into being, through the efforts of Mr. Alfred Bossom and others, the Building Industry Council of Review, a small unofficial committee to review the state of the building industry in view of the threatening slump. Mr. Bryant became its Secretary and in the next year Secretary also of the Advisory Council of the Building Industry. These two bodies merged in 1932 as the Building Industries National Council. Mr. Bryant, who had played a large part in the developments leading to the formation of B.I.N.C., naturally became its first Secretary. In the meantime he had in 1930 become Clerk to the National Joint Council; thus for the rest of his life he was to be doing two jobs at once.

This was no easy task, especially after 1939, when the war led to a great growth in the work of the Joint Council. Nor, in this respect, was the end of the war to bring any relief, for in 1945 the Apprenticeship Board came into being as part of the Joint Council. The measure of the work he did under the direction of the Employers' and Operatives' Feder-

ations can be seen to some extent by comparing the Constitution and working rules of the Joint Council in 1930 with those of to-day.

But his real heart was in the work of B.I.N.C., and the failure of that organisation fully to realise its aims caused him great disappointment — disappointment not for himself, for he was singularly free of personal ambition, but that the ideals underlying B.I.N.C. had suffered eclipse. He had the great conception of a self-governing Building Industry with all its component units working together. Although B.I.N.C. flourished for a time, it was not fitted to stand the stresses of the war and immediate post-war period. There can be no doubt, however, of the devotion and hard work he put into this cause, indeed he wore himself out at a time when he was not in the best of health.

He will be remembered as a kindly man of great courtesy and much serenity of temper, especially devoted to his family, to whom our sympathy goes out.

COMPETITION NEWS

Proposed Memorial to Royal Naval Patrol Service, Lowestoft

THE Imperial War Graves Commission invites architects who are registered under the Architects (Registration) Acts, and who are ex-serving full-time members of H.M. Forces, to submit designs in competition for a memorial which they propose to erect on a site in Bellevue Park, Lowestoft, to commemorate the names of officers and men of the Royal Naval Patrol Service fallen in the 1939-45 war, who have no known graves. The assessor is Mr. Edward Maufe, R.A., F.R.I.B.A., and premiums of £100, £60 and £30 are offered. The last day for submitting designs is May 26, 1950, and the last day for questions is March 24. Conditions may be obtained from the Secretary, Imperial War Graves Commission, 32 Grosvenor-gardens, S.W.1, on deposit of £1. Applicants for the conditions must state (a) their architect's registration number, and (b) the branch of H.M. Forces in which they served.

Proposed Modern Secondary School, Hunstanton

THE Norfolk County Council invite architects to submit designs in competition for the new county modern secondary school proposed for a site in Hunstanton. Mr. Denis Clarke Hall, F.R.I.B.A., of 6, Mason's Yard, Duke-street, St. James's, London, S.W.1, has been appointed assessor and premiums offered are as follows:—First, £500; second, £250; and third, £150.

Designs should be sent to the Chief Education Officer, Norfolk Education Committee, Stracey-road, Norwich, not later than April 11, 1950 [extended from February 28]. Conditions may be obtained from the Chief Education Officer on deposit of £2.

Details of the conditions, extracts from which follow, did not reach the offices of *The Builder* until February 14, by which date questions were required to be submitted. This was caused by the incidence of the new regulations of the Ministry of Education governing school building.

The site is approximately 22 acres and situated to the south-east of the town. It is important that the plan and layout should be as economical as possible. Orientation, light, ventilation and direct circulation must be carefully considered. The accommodation must be partly on two floors, excluding any basements or sub-basements for boiler houses that may be required. Wholly single-storey schemes and three-storey buildings will be disqualified. Outside teaching areas will not be required, and care should be taken to segregate, as far as possible, areas of noisy activity from those areas requiring silence.

The assembly hall will be used by the public and must conform to the necessary requirements for fire precautions.

The choice of building materials and system of construction is left to the competitor's discretion, bearing in mind economy in upkeep as well as in first cost. The promoters have set a maximum cost of £145,000 to cover the whole of the works, including the roads, paths, fencing, gravelling and sowing of the site, and this cost must include everything necessary for the completion of the building. The total floor area of the School (measured inside external walls) must not exceed 90 sq. ft. per pupil.

The cost of £145,000 is not to cover movable furniture.

Health Centre, Manchester

PROVINCIAL EXHIBITIONS, LTD., promoters of the Manchester Building Trades Exhibition, have organised a competition for a Health Centre, open to members and students of the Manchester Society of Architects and its affiliated societies. Messrs. F. Leslie Halliday, F.R.I.B.A., Leonard C. Howitt, B.Arch., and Dr. C. Metcalfe Brown, M.D. (Medical Officer of Health, Manchester), are assessors. Premiums of £100, £60 and £40 are offered. Conditions are obtainable from the promoters at City Hall, Deansgate, Manchester, to whom designs are returnable by March 27. No questions will be answered.

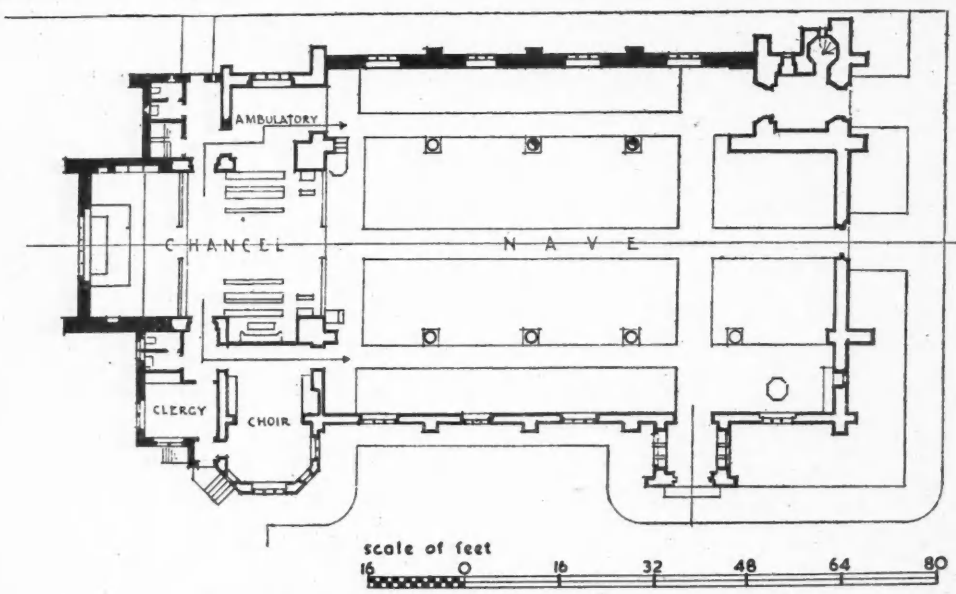
The site is 250 ft. square. A 50-ft. road runs along the northerly side and a 35-ft. road on the west side. There is a 20-ft. building line on both of these frontages. An open school playground abuts against the south boundary and on the east an open space 70 ft. wide separates the site from a block of three-storey flats. The site is level and all services are available. The health centre would serve a population of 20,000.

COMPETITIONS OPEN

HALL OF RESIDENCE, UNIVERSITY OF NOTTINGHAM. Promoted by Council of the University of Nottingham. Premiums: £1,000, £750 and £500. Assessor: Sir Percy Thomas, O.B.E., P.-P.R.I.B.A. Conditions from the Registrar, The University, Nottingham, on deposit of £2 2s. Closing date: March 11, 1950.

PUBLIC HALL AND RESTAURANT, WHITEHAVEN. Promoted by Whitehaven Corporation. Premiums: £300, £250 and £175. Assessor: Mr. Harold A. Dod, M.A., F.R.I.B.A. Conditions from Town Clerk, Town Hall, Whitehaven, Cumberland, on deposit of £2. Closing date: March 15, 1950.

WAR MEMORIAL BUILDINGS, JERSEY, C.I. Promoted by Association of Old Victorians. Premiums: £75, £50 and £25. Assessor: Mr. A. E. O. Geens, F.R.I.B.A. Conditions from Mr. A. H. Worrall, 25, Cleveland-road, Jersey, C.I. Dep. £1. Closing date: April 3, 1950.



CHRIST CHURCH, BECKENHAM, KENT: The plan. (*See facing page.*)

CHRIST CHURCH, BECKENHAM, KENT

Work of Restoration

CHARLES SYKES, A.R.I.B.A., ARCHITECT. LESLIE T. MOORE, F.R.I.B.A., CONSULTANT

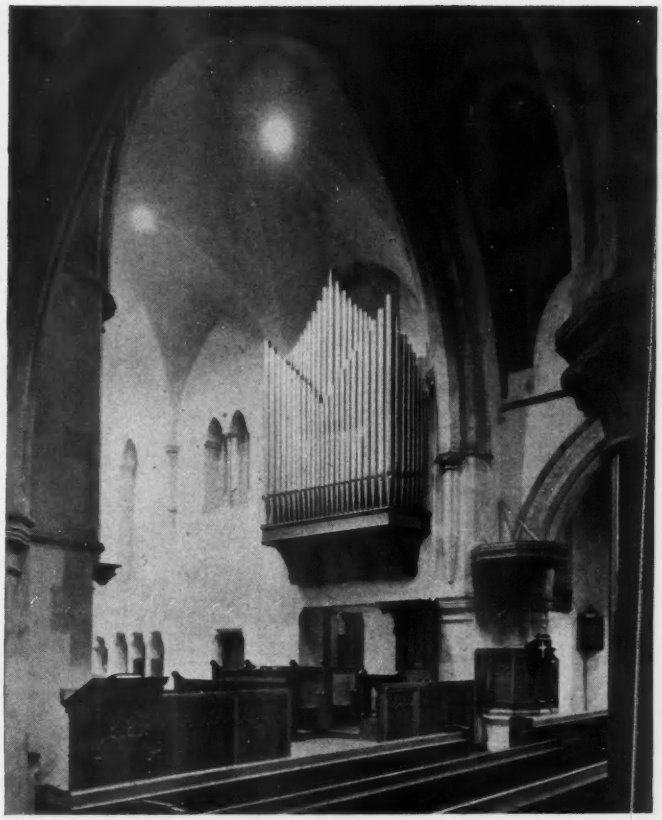
THIS church was damaged by a fly-bomb on January 5, 1945. Appropriately on January 5, 1950, the church was reopened by the Rt. Rev. the Lord Bishop of Rochester. Damage was found to be so extensive that the opportunity was taken to make certain additions and much-needed improvements in the rebuilding. The roofs were partially blown off, and those that remained were found to be unsafe and beyond repair. Many walls were disrupted and cracked and the majority of the doors, windows and equipment of the church were damaged.

Subsequently a scheme was prepared for the restoration of the nave with certain structural alterations. The aisle walls were raised a further four feet and greater stability was given to the nave arcade walls by the substitution of new concrete roofs over the aisles. At the same time the aisle windows were enlarged to improve the light.

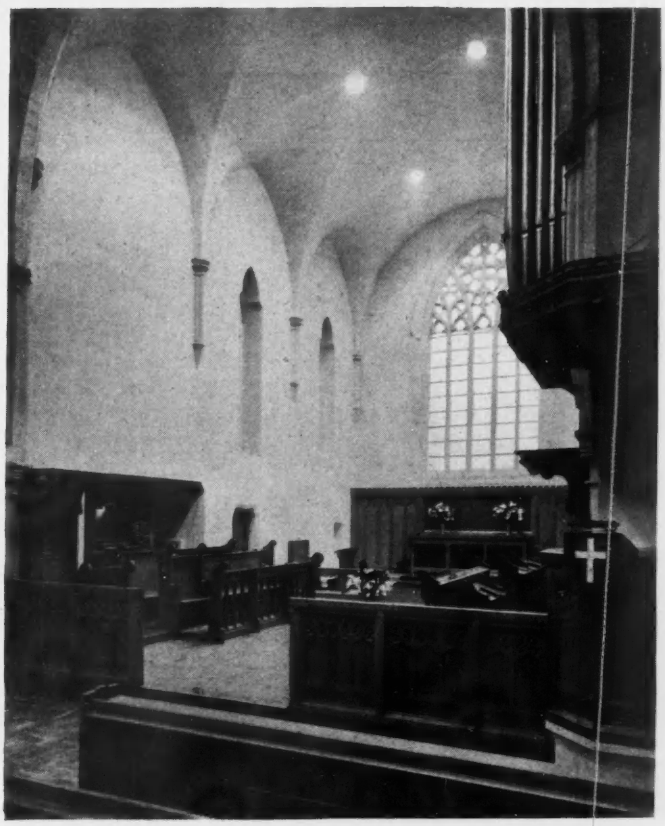
The original chancel was very cramped, and it was therefore decided to extend the length a further fifteen feet eastwards and to raise the chancel arch. Hitherto the organ had been so completely enclosed in the organ chamber that its sound was largely shut in and the full effect could not be heard in the body of the church. In the rebuilding the organ has been elevated, and the openings to the nave and chancel increased. The console has been resited on the north side of the chancel. To avoid the confusion created in the past by communicants proceeding to, and returning from, the Holy Table, a more open plan has been evolved—doorways have been arranged on each side of the chancel and communicants may, when leaving the Table, pass back into the nave through the choir vestry on the north side or through the ambulatory under the organ in the new position on the south side.

The nave and chancel roofs have been constructed with aluminium alloy trusses, and externally covered with copper sheeting. The vaulted ceiling of the chancel is formed with "Colterro" lathing suspended from the trusses and finished in lime plaster. The nave ceiling is constructed with untreated fibre-board sheets in a series of facets for acoustical reasons. The west walls of the church have been treated with a sound-absorbent material—the remaining walls covered with a cream rough-textured lime plaster. The acoustics of the church have proved to be highly satisfactory—Mr. Hope Bagenal, F.R.I.B.A., was consulted.

The original organ has been repaired and adapted, the original choir stalls and certain other chancel fittings renovated and finished to harmonise with the new carved screens, panelling, lectern, pulpit and sounding board. New pews have been provided, but it is interesting to record that wood from the original damaged pews has been used in the construction of those at the west end. The nave and chancel are lighted by fittings mounted over apertures formed in the ceiling and are immediately accessible for servicing from walkways in the roof space. The aisles have multi-flood trough lights set high up at the intersection of aisle roofs and arcade walls. The heating is by an accelerated low-pressure hot-water installation served from an automatic gas-fired boiler.



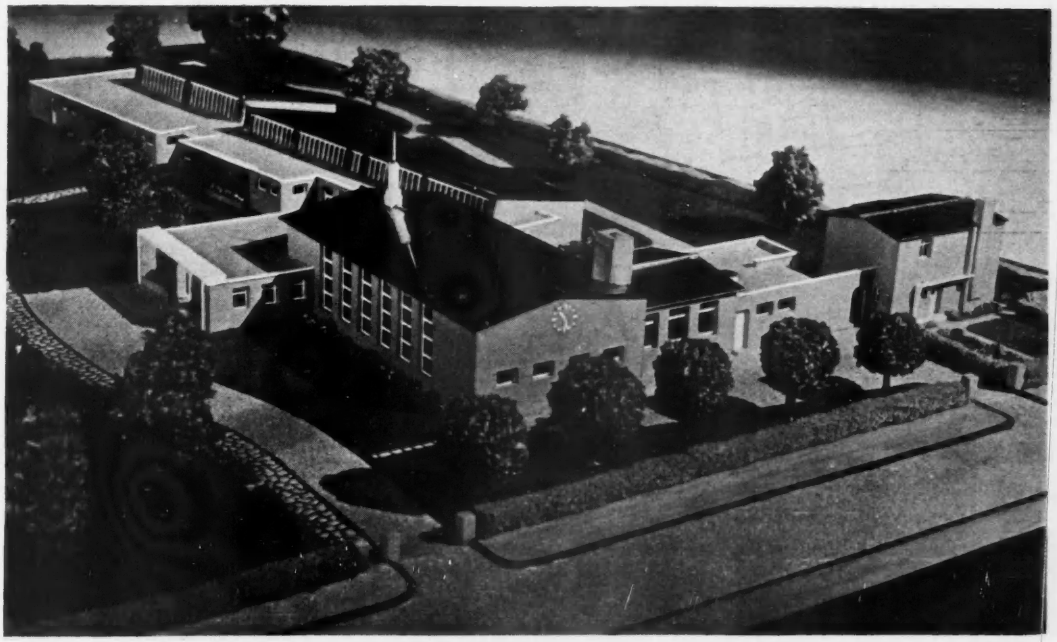
View from N. aisle, looking towards choir. *Below:* View from nave, looking into chancel.



The quantity surveyors were Messrs. Tucker and Huntley and the general contractors Messrs. Holloway Bros. (London), Ltd., the foreman being Mr. T. W. Humble. Sub-contractors were : Trusses fabricated by Dawnays, Ltd. ; copper roofing, F. Braby and Co. ; flat-roof finishings, Frazzi, Ltd. ; acoustic wall treatment, H. W. Cullum, Ltd. ; wood-block floors, Jefferiss (Camberwell), Ltd. ; suspended ceiling, W. H. Colt (London), Ltd. ; lighting fittings, Holophane, Ltd. ; lighting installation, London Electricity Board (Beckenham) ; heating installation, G. N. Haden and Sons, Ltd. ; leaded lights, Welstead, Ltd. ; lightning conductors, W. J. Furse and Co., Ltd. ; stone cleaning, Reparations and Steam Brush Co., Ltd. ; plastering, H. and F. Badcock, Ltd. ; ironmongery, Yannedis and Co., Ltd. ; church furniture, E. Bowman and Sons, and Holloway Bros. (London), Ltd. ; and adapting and rebuilding organ, Henry Willis and Sons, Ltd.

Photograph by courtesy of *The Beckenham Journal.*

CHRIST CHURCH, BECKENHAM, KENT ; *Top :* **Interior after restoration.** *Bottom :* **Interior before devastation.**



View of model from north-west, showing hall in foreground.

DESIGN FOR A COUNTY PRIMARY SCHOOL, THORNABY, FOR NORTH RIDING E.C.

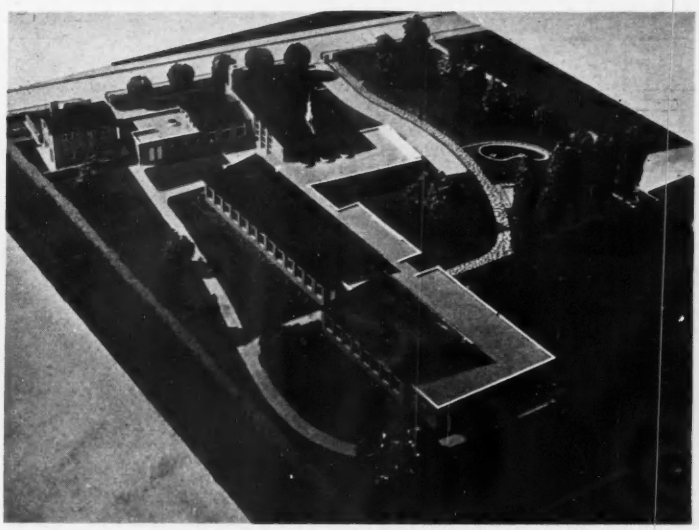
HUBERT AND H. M. LIDBETTER, F. AND A.R.I.B.A., ARCHITECTS

THE site is part of ground on which it is eventually proposed to erect three schools. It is rectangular in shape, flat and has no natural features.

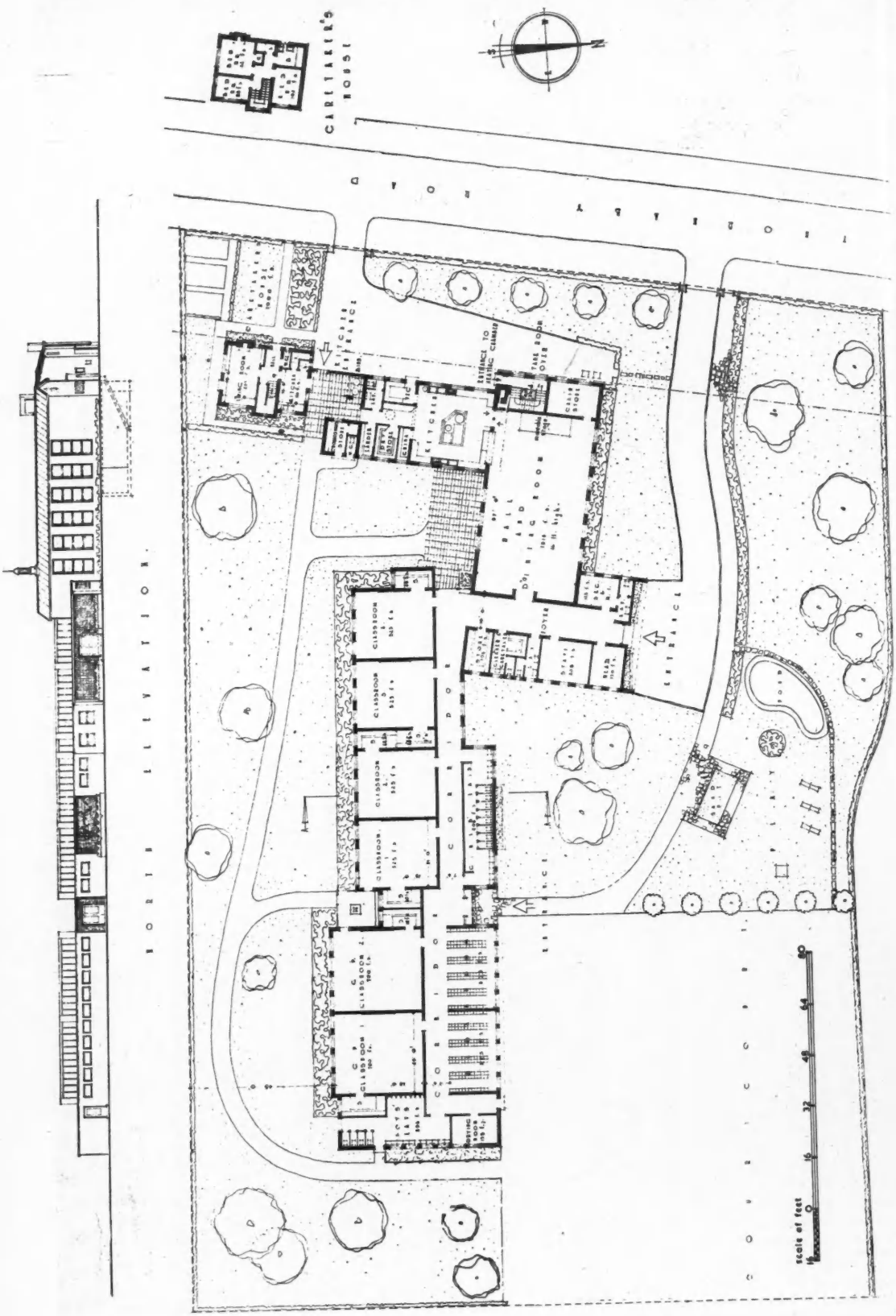
PLAN: The proposal is to provide a two-form entry school for 240 infants of both sexes, with four classrooms and two general purpose rooms, each with its own store; lavatory and cloakroom accommodation adjacent to the classrooms and divided according to sex; an assembly hall and staff accommodation adjacent to the main entrance; a kitchen with service to the assembly hall which will also be used as a dining-room; and a three-bedroom caretaker's house adjacent to the kitchen entrance. To economise, it is proposed to make the classrooms 25 ft. deep from front to back by 21 ft. wide. To compensate for any reduced amount of light at the corridor side of the classrooms, it is proposed to have a large clearstorey or north light which could be double glazed if funds permit. Cross-ventilation could be provided by opening the sections of the clearstorey light, or alternatively it might be cheaper to make this a fixed light and provide roof ventilation at the back of the classroom.

The main entrance is planned next to the staff quarters and the assembly hall, and there is an additional entrance adjacent to the playgrounds leading more directly to the cloakrooms and the classrooms. It is proposed to have direct access to the outside from one classroom and one general purpose room. A door at the west end of the main corridor leads to a sheltered paved area approximately 32 ft. by 16 ft., open to the south. This should make an ideal sheltered and accessible outside teaching space for good weather use.

SITE LAYOUT: Two tarmac-paved courts are the main requirements outside the buildings, but also provided is a short road leading from the main entrance gates to the main entrance with sufficient space by the main entrance for turning and parking one or, at the most, two small cars; a footpath alongside the road and continuing to connect with



View of model from south-east.



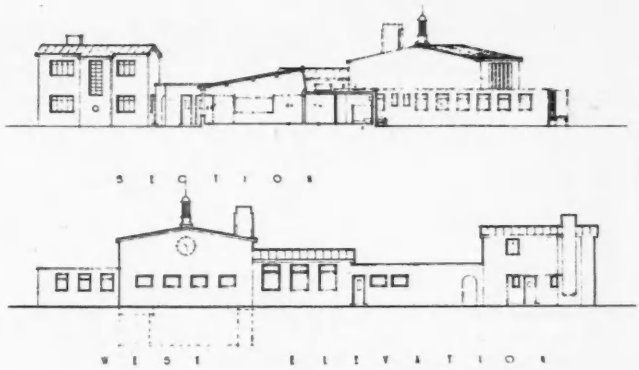
COUNTY PRIMARY SCHOOL, THORNABY: COMPETITION DESIGN: BLOCK PLAN

the playground ; and a service road to the kitchen entrance and to the heating chamber so that lorries can deposit fuel straight into the fuel chamber.

It is proposed to provide a sandpit, with paved surround, and a pond away from the buildings to the north of the site, which will be situated in a grass area usable for playing purposes. The area between the buildings and the southern boundary can be laid out as an informal garden with flower beds close to the building and a path connecting the various entrances on this side of the building. It is suggested that some trees and shrubs should be planted here to offer some shade if outdoor teaching is required.

CONSTRUCTION AND FINISHES: It is considered that for a project of this size and character a traditional structure is the most economical and desirable. Framed construction has distinct advantages with speed of erection on large projects, but is rarely cheaper, and with a comparatively small building is probably more expensive. It is, therefore, proposed to employ load-bearing brick walls as far as possible with flat roofs of reinforced concrete or wood wool slabs on spans, finished on the upper surfaces with mineralised felt. It is at present proposed to cover the pitched roofs with insulation board and a covering of very light gauge copper. This has the advantage of lightness, good appearance and thermal qualities.

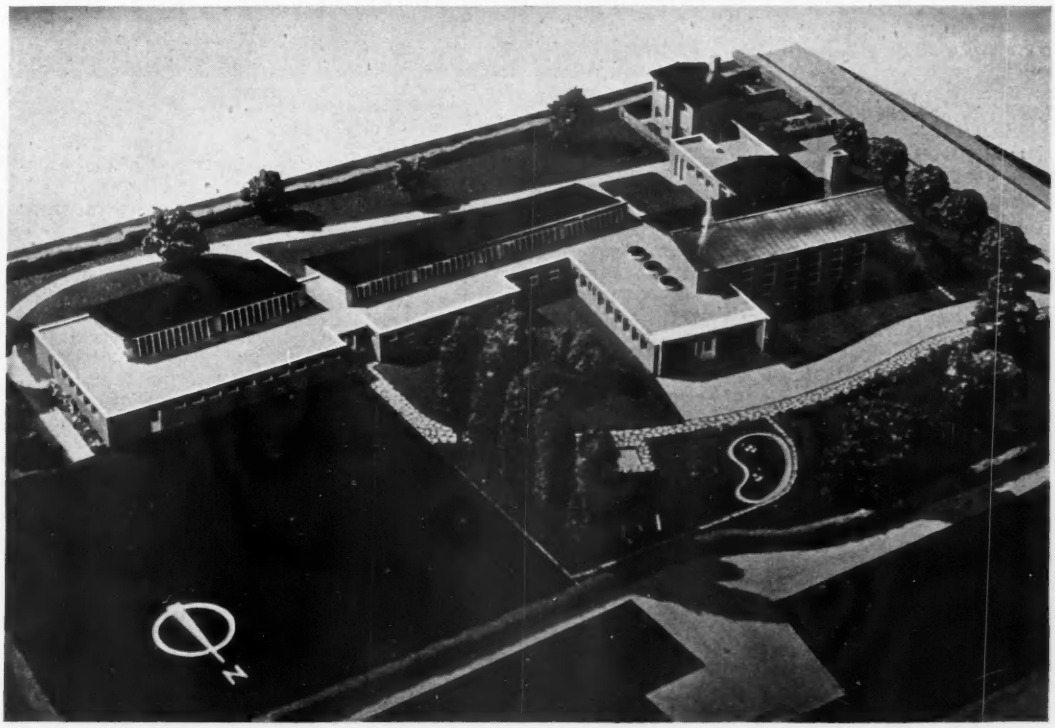
The north light windows to the classrooms will be of patent glazing, and if funds permit, it is strongly recommended to use double glazing so as to reduce the heat loss. This would reduce radiator size and fuel consumption.



It is not considered necessary to employ continuous glazing on the external walls to the classrooms. A more intimate and domestic appearance and scale has been sought, more in keeping with the minds of infants and resulting in a choice of wood-frame windows built into the brickwork in the traditional manner. The windows themselves will be glazed in relatively large panes of glass and will be centre pivot hung so that the whole area can be made to open. This type of window is extremely easy to operate and needs no gearing or long arms. External walls will be of brickwork.

Floors will be of solid concrete, with a wood block finish to the classrooms, assembly hall, foyer and staff rooms, a composition tile for the corridors, lavatories, cloaks and classroom stores, and a greaseproof composition tile for the kitchen and ancillary rooms. Walls to the main rooms will be plastered and corridors, stores and kitchen, fair-faced brickwork. A cement-glazed dado will be provided in the kitchen and cloakrooms and lavatories. Ceilings will be fibre board or plaster according to the roof constructions and their position.

HOT WATER AND HEATING: To be by accelerated low pressure hot water, fed by coke-fired boilers, but with gravity circulation in cases of emergency. The service pipes will be encased in small ducts on ground-floor level. Similar provision will be made for a hot water system, but some of the pipes may be exposed at high level in the corridors and lavatories. The model from which our photographs are taken was made by Mr. C. R. Rae, A.R.I.B.A., an assistant in the architects' office.



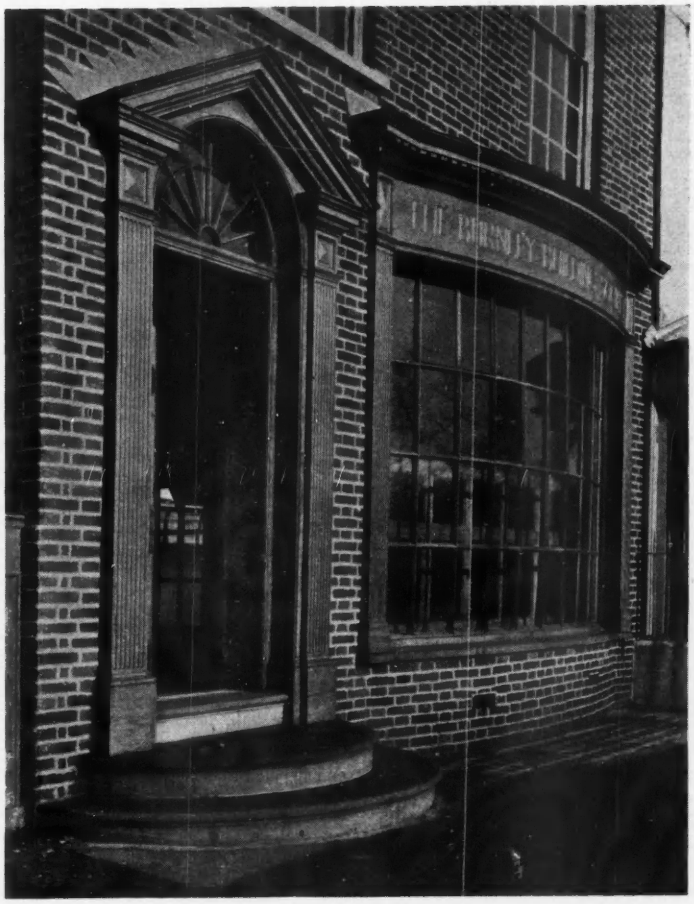
COUNTY PRIMARY SCHOOL, THORNABY : View from north-east.

RECONSTRUCTION OF a Georgian Terrace House, Brunswick Place, Southampton

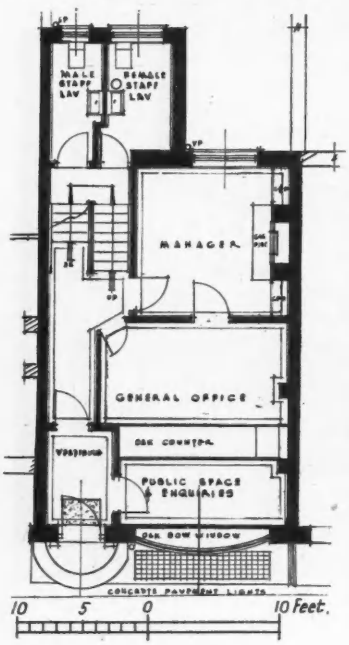
W. H. SAUNDERS AND SON, L.R.I.B.A., ARCHITECTS

THE premises acquired by the Burnley Building Society for conversion into their area offices formed No. 4, Brunswick-place, Southampton, the last of a row of late Georgian terrace houses, but unfortunately having a heavy Edwardian building on the other side. The property was in very poor state of structural repair, and it was deemed necessary to take down and completely rebuild the main façade, and to renew the whole of the floors in the front half of the building (there being considerable dry rot and worm infestation in the original timbers) and completely to reconstruct the roof. In addition, the clients required certain alterations to the ground floor and general renovation throughout.

It was decided that the external treatment of the building should be in sympathy with the majority of the buildings in the street, and the main elevation was built in 2-in. Old English facing bricks and a Georgian oak reproduction bow window provided, together with an oak pedimented doorway, and sliding sash windows to the windows of the upper floors. The reconstructed roof was re-covered in Old Delabole rustic slating. The existing basement area was slabbed over and a pavement light incorporated therein, together with York stone steps to the entrance. Minor alterations were carried out to the basement to provide stores and a tea room. The ground floor was altered to provide a panelled entrance hall with oak glazed doors and the rear wing at mezzanine level was reconstructed to provide male and female sanitary accommodation. The three upper floors were adapted and renovated to form further office accommodation. A completely new electrical installation was provided and a gas installation to provide hot water and heating by gas fires in the rooms. Considerable attention was given to decorative schemes and finishings and fittings. The floors to the main office, hall, staircases, etc., are finished in rubber tiling. The approximate cost of the reconstruction was £3,750.

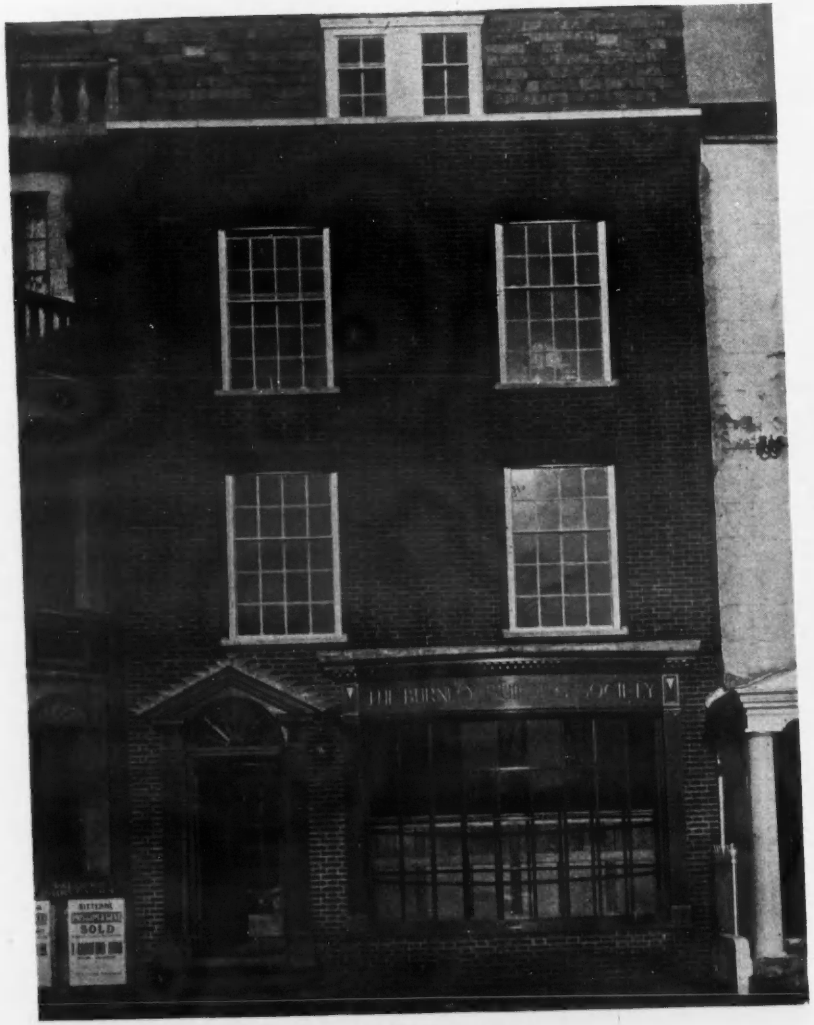


Detail of front as reconstructed.

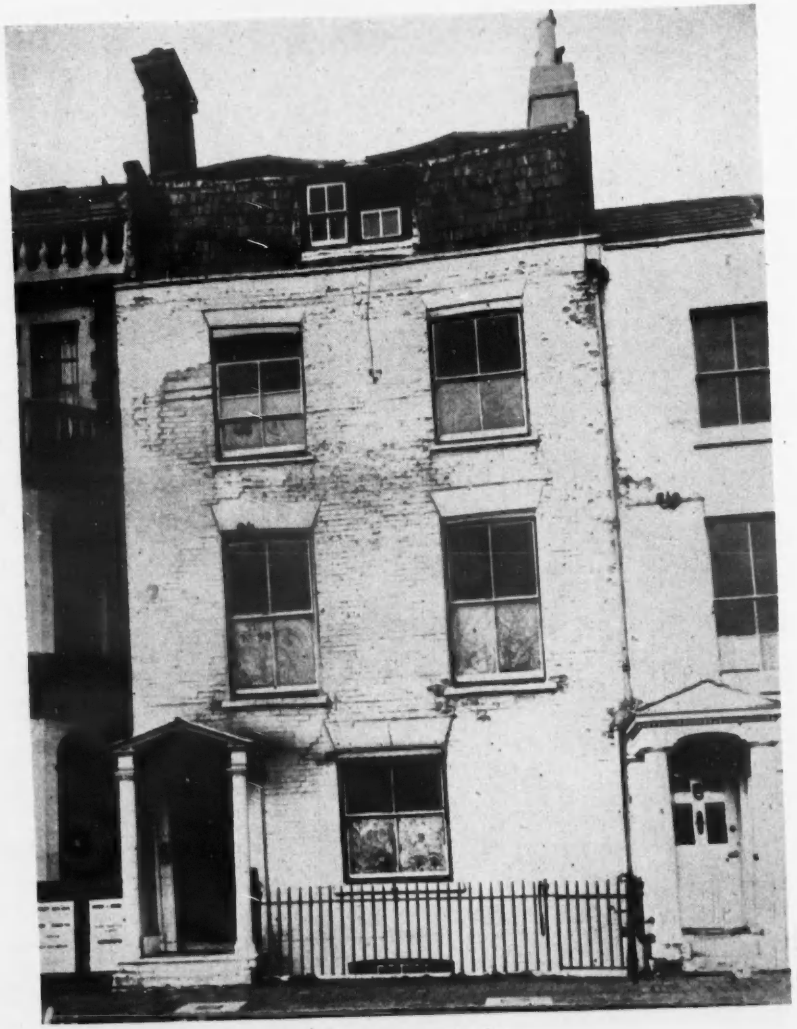


The quantity surveyors were Messrs. Shears and Pick, of Southampton, and the general contractors Messrs. W. A. Fussell, also of Southampton.

The following were the principal sub-contractors and suppliers: Shop window and pedimented entrance doorway, Samuel Elliott and Sons (Reading), Ltd.; bricks, Blanchards (Bishops Waltham), Ltd.; aluminium sliding sash and standard metal windows, the Crittall Manufacturing Co., Ltd.; slating, Elliott Bros. (Roofing), Ltd.; pavement light, J. A. King and Co., Ltd.; York stone steps and Portland stone coping, Stoneham Masonry Co.; gas installation, Southampton District Gas Undertaking; electrical installation, A. E. Buckett and Sons; sanitary fittings and internal joinery, including counter, W. A. Fussell; wallpapers, A. Sanderson and Sons, Ltd.; paint materials, T. Parsons and Sons, Ltd.; and paint materials, Cellon, Ltd., and Imperial Chemical Industries, Ltd. (paints division).

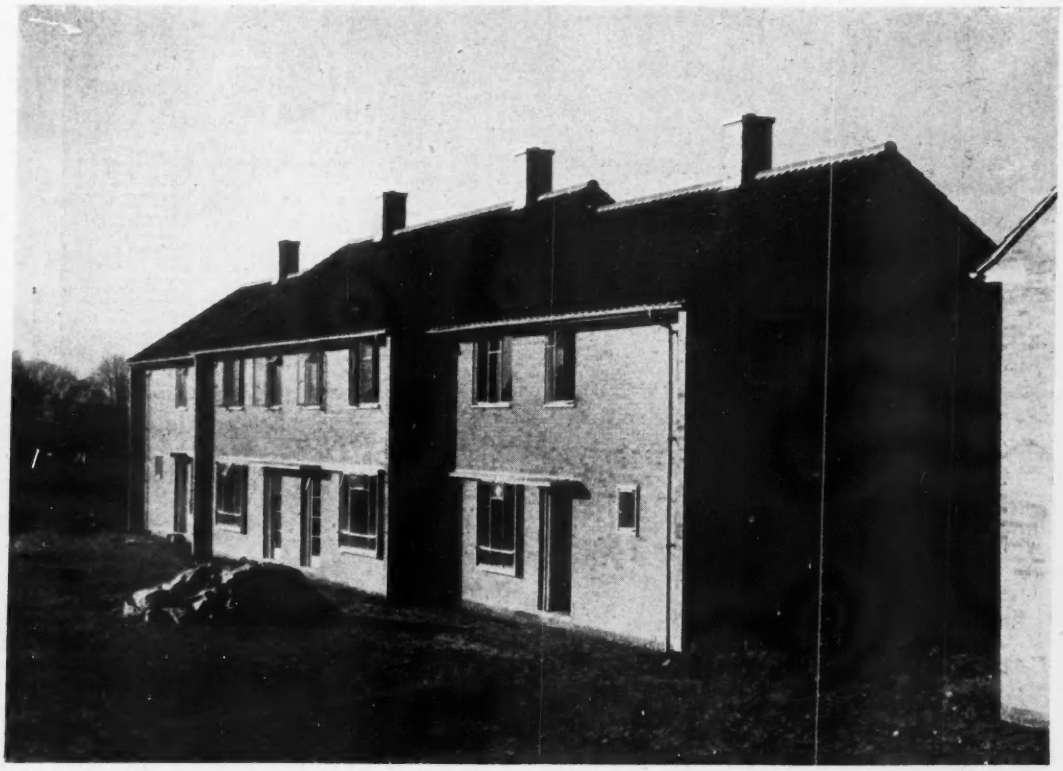


View of front as reconstructed.



View before reconstruction.

RECONSTRUCTION OF A GEORGIAN TERRACE HOUSE, BRUNSWICK PLACE, SOUTHAMPTON



TERRACE HOUSING AT HEMEL HEMPSTEAD NEW TOWN, HERTS.

H. K. ABLETT, F.R.I.B.A., A.M.T.P.I., Chief Architect

THE first four houses of the initial housing project of Hemel Hempstead Development Corporation, started in April last, have now been completed and opened. A further 96 houses are in progress under the same contract, while a further project of 129 houses is now under erection; these latter include 36 semi-detached three- and four-bedroom houses with attached garages designed for those who can afford higher rents. It also includes a number of plots which can be leased for building by individuals. The Corporation's third and fourth housing contracts, totalling 281 houses, are to be started next month. Work on the first 36 flats is already in hand, and the building of 14 shops, with 15 maisonettes over, has just begun. The first factory is scheduled for completion in the autumn.

The houses illustrated are part of a pilot scheme designed to test seven types of houses, semi-detached, terrace and three-storey terrace. They are brick built, and each house has cost about £1,500. The shops are part of 32 planned for the neighbourhood centre. The Corporation expects to start 684 dwellings during 1950 and to complete 200. The building contract for the initial housing contract (part of which is now illustrated) has been placed with Messrs. Jesse Mead, Ltd., of Chesham. The layout and the house designs are the work of the Corporation's architectural department, whose Chief Architect is Mr. H. K. Ablett, F.R.I.B.A., A.M.T.P.I. The Principal Assistant is Mr. P. R. Bee, A.R.I.B.A.

CORRESPONDENCE

The Supply of Architects : Statement by the A.B.T.

TO THE EDITOR OF *The Builder*.

SIR,—In your issue of February 3, "Criticus" drew attention to the dictatorial attitude of the Association of Building Technicians, as disclosed in its statement published in the technical Press* and asked that Association to justify this attitude by giving the numbers of registered architects in its ranks.

As one would expect, and as on previous occasions, this request drew forth the usual evasive reply. The reason is not far to see; it is that of a total of 15,824 architects on the Architects' Register, only 554 are members of the A.B.T.

This means that the A.B.T. represents only about one-twenty-ninth of the profession.

It is now for your readers to judge whether this representation justifies the following points in the A.B.T. statement.

(1) That the Association was not consulted by the Architects' Sub-committee of the Technical and Scientific Register before publishing its report; (2) that it cannot accept the report's "extraordinary conclusion"; (3) that the Association is the "trade union for architects."

I now take this opportunity, however, to ask the A.B.T. to give your readers a breakdown of the 554 registered architects in its ranks, by stating how many of these are members of the R.I.B.A.—giving those in each class, and also to forward a list of the names of these members to the secretary of the R.I.B.A. in order to substantiate the figures given.

With regard to the formation of an architects' trade union, when the time comes for this, it may be advisable for those so concerned first of all to study the organisation of the British Medical Association. There it will be found that the membership does not include nurses, chemists or undertakers.

An architects' trade union must be formed "by" architects and "for" architects only, and must be non-political.

And when this is formed the A.B.T. will be found reaching for its shutters.

SIDNEY LOWETH.

"Westways,"
Bearsted, Kent.

Surveyors' Registration

TO THE EDITOR OF *The Builder*.

SIR,—I have read the further correspondence regarding the above matter, and as there appears almost complete unanimity on the subject it now seems a question of someone taking the initiative. If none of your other correspondents care to do this, and as my name has been mentioned, I would be quite prepared to do the initial work of convening a preliminary meeting to discuss and arrange the formation of a separate association of selected independently practising surveyors, now unattached.

This would be a preliminary to securing official "registration," action in respect of which would of course be taken jointly with the present recognised institutions and associations. Will all those practising surveyors who are interested get in touch with me direct?

G. H. LAKE.

188B, Stamford Hill, N.16.

* *The Builder*, January 13.

TO THE EDITOR OF *The Builder*.

SIR,—Having read the further correspondence in *The Builder*, I am making the following concluding remarks to my letters on the subject of the suggested registration of surveyors:—

1.—That my opinions are not at all affected by anything I have read;

2.—That I contend the protection of any profession leads to exploitation of the public by its members and also to inefficiency and "swank" on the part of its members;

3.—That I value my position as a member of the public more than I do that of my position as a member of a profession and hope to see the day when the public will force protected professions to relinquish their privileges which, I contend, they enjoy to the detriment of the public interest.

P. M. VINTER, A.R.I.C.S.

132, Kingston-road, Teddington.

"Appointments Open": Lack of Courtesy by Advertisers?

TO THE EDITOR OF *The Builder*.

SIR,—I would like to place on record that I am surprised and dismayed at the lack of courtesy shown by virtually all the advertisers in your "Appointments Open" columns.

Having written after posts on many occasions, faithfully enclosing copies of references, at a cost of about 1½ hours time, paper and stamp, the vast majority of so-called business and professional firms have not the common sense to realise that to people like myself this is costly, and I am dispirited by the constant lack of consideration and etiquette shown by them.

They do not acknowledge receipt of my application, or return the references, if I am not suitable. Surely it is not asking too much that they should return documents laboriously prepared?

As a member of the Institute of Builders, and of professional bodies, I therefore appeal to you to publish this letter, for many thousands of would-be worthwhile applicants for good positions, I am sure, feel the same as I, that this lack of courtesy results in many suitable applicants not putting in for jobs.

AN APPLICANT.

Housing and Timber Shortage : Suggested Competition for Alternative Construction Methods

TO THE EDITOR OF *The Builder*.

SIR,—Being a "lay" reader of your excellent paper, I venture to "step in where angels fear to tread . . ." and to make the following suggestion :

All know that the shortage of timber and dollars is mainly the reason for restrictions placed on building houses in this country. Right then, why not a competition for an alternative method of roof construction involving the use of materials in free supply and not unsuitable on account of cost? I mention the roof, of course, since this takes the most timber in houses of to-day. Solid floors have dealt with the ground-floor problem and, no doubt, some hollow brick construction could be applied to the first floor if we are really so grievously short of dollars as we are led to believe.

Returning to the main difficulty—the roof—we lack no variety in methods used for small factory roof construction, as is shown often in your periodical. Surely, therefore, it is possible adequately to brace a roof for a house with aluminium alloys of lattice or extruded sections and tubular members, etc., as stresses and strains require. We must not rule out concrete—on account of cheapness—nor precast or even prestressed members where greater strength is needed.

I am certain that those, like myself, who desire above all else to build a house, with architect supervision, would be only too willing to pay any increase involved to reach this goal which, alas, seems always to be receding.

K. F. JEFFERSON.

35, Betenson-avenue,
Sevenoaks, Kent.

R.I.B.A.

Membership

AT a meeting of the Royal Institute of British Architects held on February 7, the following members were elected:—

AS HONORARY ASSOCIATES (2).—R. Deakin, O.B.E. (London), Dr. Joan Evans, D.Litt (Wotton-under-Edge, Glos. and London).

AS HONORARY CORRESPONDING MEMBER (1).—H. Schumacher (Luxembourg).

AS FELLOWS (4).—F. D. Firth (London), H. H. Goldsmith (Bath), H. K. Wakeford (London), A. E. Westerman, A.A. Dip. (Hons.) (London and West Wickham, Kent).

AS ASSOCIATES (46).—E. T. Allen (Leeds Sch. of Arch.) (Hawes, Yorks), D. Bain, D.A. (Edin.) (Edinburgh Coll. of Art: Sch. of Arch.) (Penicuik, Midlothian), W. T. Bebb, Dip. Arch (Cardiff) (Welsh Sch. of Arch.: The Tech. Coll., Cardiff) (Abertysswg, Rhymney, Mon.), J. P. R. Black (Liverpool Sch. of Arch.: Univ. of Liverpool) (Leigh-on-Sea, Essex), M. R. Bourne (Leicester Coll. of Art and Tech. Sch. of Arch.) (Exeter), J. H. Bramwell (King's Coll.) (Univ. of Durham) (Newcastle-upon-Tyne Sch. of Arch.) (Darlington, Co. Durham), D. M. Brock, B.Arch. (Hons.) (L'pool) (Liverpool Sch. of Arch., Univ. of Liverpool) (Liverpool), P. V. Brown, B. Arch. (L'pool) (Liverpool Sch. of Arch: Univ. of Liverpool) (Birkenhead), R. H. E. Bull (Northern Poly., London): (Dept. of Arch.) (London), K. M. Carver, D.F.C., final (Rayleigh, Essex), J. D. H. Catleugh (Bartlett Sch. of Arch: Univ. of London) (London), P. B. Clarke, B.Arch. (L'pool) (Liverpool Sch. of Arch.: Univ. of Liverpool) (Ashbourne, Derbyshire), L. M. Cleverly, final (North End, Portsmouth), P. R. Diplock, B.Arch. (Hons.) (L'pool) (Liverpool Sch. of Arch.: Univ. of Liverpool) (Liverpool 8), F. Dunnett, final (Chelmondiston, Suffolk), D. A. Fiett (Edinburgh Coll. of Art.: Sch. of Arch.) (Findochty, Banffshire), T. I. Frith, B.A. (Hons. Arch.) (Sheffield) (Univ. of Sheffield: Dept. of Arch.) (Harthill, Sheffield), A. G. Gass, B.Arch. (Hons.) (L'pool) (Liverpool Sch. of Arch.: Univ. of Liverpool) (Whitehaven, Cumberland), M. R. Griffiths (Welsh Sch. of Arch.: The Tech. Coll., Cardiff) (Pontypridd), E. E. Hollamby, final (London), G. H. Holroyd, B.A. (Hons. Arch.) (Sheffield) (Univ. of Sheffield: Dept. of Arch.) (London), M. (Miss) Howell, B.Arch. (L'pool) (Liverpool Sch. of Arch.: Univ. of Liverpool) (Liverpool), D. D. Jones (Leicester Coll. of Art and Tech.. Sch. of Arch.) (Leicester), A. E. Leithead (King's Coll.) (Univ. of Durham) (Newcastle-upon-Tyne Sch. of Arch.) (Norwich), W. McGoran, B.Arch. (Dublin) (Univ. Coll., Dublin, Ireland: Sch. of Arch.) (Wexford, Eire), A. C. Mackintosh, D.A. (Edin.) (Edinburgh Coll. of Art: Sch. of Arch.) (Wallasey, Cheshire), G. S. Madeley, Dip. Arch. (Birm.) (Birmingham Sch. of Arch.) (Birmingham), A. Metcalfe, Dip. Arch. (Leeds) (Leeds Sch. of Arch.) (Normanton, Yorks), G. E. Michell (Arch. Assoc. (London) Sch. of Arch.) (London), M. (Mrs.) Millett (Poly., Regent-st., London: Sch. of Arch.) (London), A. M. (Miss) Moat (Leeds Sch. of Arch.) (Chapel Allerton, Leeds), D. F. Oakley, final (Guildford), R. W. Pass (Leeds Sch. of Arch.) (Leeds), M. J. Pegg, Dip. Arch. (Nottm.) (Nottingham Sch. of Arch.) (Nottingham), D. Pringle (King's Coll.) (Univ. of Durham) (Newcastle-upon-Tyne Sch. of Arch.) (Middlesbrough, Yorks), R. J. Rabson (Northern Poly. (London): Dept. of Arch.) (London), H. W. Rolley, Dip. Arch. (Birm.) (Birmingham Sch. of Arch.) (Kidderminster, Worcs.), A. H. Roper, Dip. Arch. (L'pool) (Liverpool Sch. of Arch: Univ. of Liverpool) (Hoylake, Cheshire), A. F. Samuels, final (London), B. A. W. Savage, final (Newtown, Bristol), I. G. D. Simpson, D.A. (Dundee) (Dundee Coll. of Art: Sch. of Arch.) (Monifieth, Angus, Scotland), W. A. B. Spence, B.Arch. (L'pool) (Liverpool Sch. of Arch.: Univ. of Liverpool) (Cambridge), E. A Towell, final (Richmond, Surrey), E. R. Vaughan (Leeds Sch. of Arch.) (Leeds), R. W. Warner, final (Burford, Oxon), G. Yeates, Dip. Arch. (Manchester) (Victoria Univ., Manchester: Sch. of Arch) (Salford).

AS LICENTIATES (5).—F. A. Collard (Ainsdale, Southport), J. Donaldson (Wakefield), J. Kryton (London), A. F. Murray (Croydon, Surrey), and G. M. Tonge (Southport).

PLANNING AND AGRICULTURE

"What Standards Can We Afford?"

THAT work, homes, food, recreation, movement and security were the human needs which must be satisfied from the land was a statement made by PROFESSOR L. DUDLEY STAMP, C.B.E., B.A., D.Sc., Hon. M.T.P.I., in a paper entitled "Planning and Agriculture," which he read before the Town Planning Institute on February 2. We publish the following extracts from his paper:—

We must start with the recognition of the very small area of land with which we in Britain have to deal—less than 1¼ acres per head, or, if we take England and Wales alone, only some 37,000,000 acres for 44,000,000 people. Out of this total, about 24,000,000 acres are improved farmland—crops and grass—or a little over half an acre per head.

Since we are primarily an industrial nation and nine-tenths of our people live in towns, location of industry where it has as many favourable physical factors as possible becomes a first priority. Many industries—the extractive and heavy industries—are fixed by physical factors, and our national economy is such that we cannot afford to sterilise important mineral resources.

The calculations of the Land Utilisation Survey showed that in 1931-9 houses with gardens occupied 1,564,600 acres in England and Wales, and land agriculturally unproductive, including industrial and waste as well as closely spaced housing without gardens, another 1,191,500 acres. We face the position that large additional areas are needed for the proper housing and rehousing of our people.

The use of land for food production involves more than farming, because of the need to consider integration with forestry—agro-forestal use—to balance production of food with raw materials. Recreation involves not only the provision of parks and playing fields, but also on the larger scale the question of "access" land and national parks with which we must link nature conservation areas. Transport involves consideration of new motor roads and airports as representing new demands on land, and security brings into the already complex picture the demands of the fighting services for training grounds.

The dovetailing of all these demands is the core of physical planning—selection of the right sites needs to be coupled with the abolition of any "waste" land and the multiple use of much that remains.

Speaking of the demands of housing, industry and new towns on land and space standards, Professor Dudley Stamp said:

We have no accurate figures of the areas actually occupied by human settlement, but the calculations made on the maps of the Land Utilisation Survey (1931-5 approximately) gave 1,564,613 acres of houses with gardens (12 to the acre or less) and 1,191,508 acres "agriculturally unproductive"—mainly close housing, industrial yards, etc.—a total of roughly 2¾ million acres. This is approximately 7 per cent. of the surface—or between 11 and 12 per cent. of the area still remaining under crops and grass.

What are our modern space standards? Using the Ministry of Health's *Design of Dwellings* (1944) we get for residential neighbourhoods a gross density of between 21 persons (open development) and 60 persons (close central development) per acre. Combining these figures with other standards laid down in the Ministry of Town and Country Planning's Residential Neighbourhood Handbook we get a space requirement of about 55 acres per 1,000 of population. Actually in the demarcation of areas for new towns the space standards are more nearly 100 acres per 1,000 population—6,000 acres for a projected town of 60,000.

We must remember that the Land Utilisation Survey's figure for houses with gardens includes many gardens and orchards attached to farms, large country house gardens and new residential areas already with satisfactory space standards. If it is necessary to rehouse half the population the land required would not, of course, be entirely, but certainly very largely, *additional*. Twenty-two million people at 10 to the acre represents 2,200,000 acres. Allowing for saving and re-use, 1½ million acres of additional land is not an impossible guess if the "new towns" standard be adopted or ¾ million acres at open residential density.

I express my doubts as to whether we are not obsessed at present with space for its own sake. In countries where land is still abundant—in the United States, Canada and Sweden—we find the demand is for a higher standard of construction and interior fitments rather than a demand for space. At the present day the almost hopeless search of the young married couple—both working—as well as of the couple whose family is now grown up and who can no longer face the burden of the garden that was formerly their joy for the self-contained, three-roomed, centrally heated, electrically run flat, leads me to believe that many of my colleagues are unwilling to face the truth. Most people have or want at least four homes in the course of their lives—the parental home, the first home after marriage (perhaps even the bachelor flatlet), the family home and garden, the retreat, town or country, for old age.

Of the demands of new schools, he said: The new standards laid down by the Ministry of Education are on a very generous scale when compared with the old, and the demand for new land is correspondingly large. There is first the horizontal layout of a single-storeyed or two-storeyed building in contrast to the old multi-storeyed town school. The minimum requirement of 15 acres for playing fields is vastly in excess of old standards.

If we take 16 per cent. of the population of 45,000,000 as of school-going age we have 7,200,000 school-children—about 6½ million urban. With 500 per school on 15 acres we get about 200,000 acres of flat and well-drained land.

A very large proportion of village schools have a small asphalted playground, with a field lent by a neighbouring farmer for games, just as the village football and cricket teams often use a field grazed when not in actual use. This old, loose arrangement was often remarkably satisfactory—such multiple use manured the field, kept the grass trimmed and resulted in a minimum cost of upkeep.

Concluding, Professor Stamp said that under our present policies he saw the probable loss of between 8 and 10 per cent. of our existing improved farm land—the food stake of some 4,000,000 people—in the next 20 years, and finished by asking: What standards can we really afford?

Discussion.

In the discussion which followed Dr. Stamp's paper, MR. F. L. LONGSTRETH THOMPSON, a past-president of the Institute, said that he agreed with the author's thesis that in England and Wales there was only a limited amount of land to satisfy the many competing claims to the use of it, and that therefore some system of rationing must be adopted, but felt that it was when the claims began to come in and their relative values had to be assessed that the quarrelling began. What Dr. Stamp had said in the end was: "Having regard to the great shortage of land, are our standards too high?" It seemed to him that Dr. Stamp had made out a case for the review of, at least, some of the standards.

Mentioning some which he thought should be dealt with, Mr. Longstreth Thompson said he thought all the members would agree that the National Playing Fields Association standard of six acres per 1,000 of population was not far out. However, we also had to consider the higher standard laid down for school playing fields and there would be the claims of new educational institutions, such as the technical colleges, for playing field space. Educationists would do well to draw in their horns in regard to such claims.

Mr. Longstreth Thompson commented that Dr. Stamp's suggestion that poorer types of land should be sought when siting roads would not work. One had to locate a road in such a way as to make it as nearly as possible the shortest distance between two points. If within reasonable limits of delineation we could go on to the less productive land and not on to good land we should take that course, but he did not think the less productive land would normally be in the right position. It was inevitable that if any physical planning was to be carried out at all, people would have to be disturbed. Agriculturists must make up their minds that replanning agricultural land would be just as necessary as replanning centres of towns.

Restoration of Land.

We needed a great deal more information on the question of the restoration for its former use of land which had been used for other purposes. If land had to be used for the extraction of minerals to the extent of £10,000 worth being extracted from it, the restoration payment should not be limited to the agricultural cost of the land at £30 per acre but should be measured by the cost of the land which had been extracted. In many cases the purchaser of the land would find that the filling in of an excavated site was entailed. Where was the filling to come from and how was the proper quality of filling to be obtained?

MR. H. W. J. HECK, also a past-president, laid stress on the need for a world survey of food production in relation to the availability of land. More of a lead would have to be given by the central authorities in the matter of determining the uses of land and the demands which the agricultural community would be called upon to meet in any given period. There was a great deal which could be done to ensure that the use of land for Service purposes, for instance, was the concern of a single ministry only. That ministry should be the Ministry of Town and Country Planning.

Not every planning authority and planning officer was helpful to the farmer, continued Mr. Heck. There was a good opportunity in the great task which lay ahead of the farmer for the planning authorities to get more experience in planning for agriculture.

Further improvement in respect to the uses of land might be achieved by the adoption of different standards for hous-

ing density and layout. The standard of eight houses to the acre, which had been adopted for municipal housing had been a great pity. There should be a little more density in planned housing.

MR. F. J. OSBORN, hon. secretary, Town and Country Planning Association, said that it had for long been a major problem for planners to provide the ordinary man with a house and a decent garden. One of the first tasks of the planning movement was to provide a minimum of space for decent living conditions, not a luxury standard. A density of 12 houses to the acre (reduced from the original of eight) was the minimum which we could hope urban people would accept. Allowing that some people would insist on more space, and applying some critical consideration to minima of space for other purposes than the house itself, you reached an overall maximum density of between 12 and 14 persons to the acre. In some existing towns it seemed impossible to redevelop at that standard. If we did, we should need a total of three and a half million acres for 44 million people. Dr. Stamp had said that we were already occupying two and two-thirds million acres, so we should need another 900,000 acres. But that would mean that in England and Wales something like 11 million people would have to be dispersed from their homes in existing towns. Actually, this was not suggested and a study of the advisory plans seemed to indicate that the number of people who would be dispersed would be between three and four millions. That would require about 250,000 to 330,000 acres, instead of the 1,500,000 to 1,600,000 estimated by Dr. Stamp.

Mr. Osborn claimed that the total value of food production would be increased and not reduced by open density housing development. The reason was partly that a new town intensified agricultural production, bringing it nearer to a market for milk, fruit and vegetables. The production achieved by home gardens, also, was probably in excess of the whole agricultural value of the site on which you built. By and large, urban building would be on land of only average farming quality. If the density was stepped up from 12 to 18 houses an acre, you would destroy food production altogether. Out of each three acres you would lose one, and for that one acre you would lose the product of three gardens.

MR. E. WIBBERLEY (Ministry of Agriculture) appealed strongly for a land budget to be worked out for Britain. When we had got it we could then argue about matters of fact instead, as now, about matters of opinion only.

SIR PATRICK ABERCROMBIE complained of what he called the backwardness of the Ministry of Agriculture in regard to planning. Planners knew enough now to know what a highly complicated business keeping off the good agricultural land was, and for that reason alone they needed all the help they could get from the Ministry of Agriculture, especially in joining in the planning of the rural areas and producing a budget of what should be the best uses to which the land could be put.

MR. DESMOND HEAP said that hitherto he had thought that the motivating force behind planning was the need to preserve amenity but he was beginning to think that the real force was that there was just not enough land to go round. He urged that the Minister of Town and Country Planning should have Cabinet rank, or at least be able to speak on better terms with his brother Ministers than he could at the moment.

FIRE PREVENTION IN BUILDINGS

Factors to be Considered by Architects

AT a meeting convened by the London and Home Counties branch of the Incorporated Association of Architects and Surveyors, and held at Caxton Hall, London, S.W.1, on February 8, MR. E. S. HODGES, F.I.A.S., F.C.I.I., spoke on building construction and its effect in minimising loss by fire. Mr. Joseph Babbs (chairman of the branch) presided.

Mr. Hodges said that fires could not be prevented from breaking out, but a fire having occurred its subsequent behaviour depended largely upon the structure in which it took place.

Facilities existed for testing the elements of buildings, such as floors, columns, walls, fire-resisting doors and other items of construction, and much information was available as to the number of hours for which typical units of construction would resist standard fire tests, so that floors, walls, etc., might be classified as conforming to standards graded from A to E, and providing protection against fire for six hours, four hours, two hours, one hour and half an hour respectively.

A joint committee of the Building Research Station of the Department of Scientific and Industrial Research and the Fire Offices Committee had issued in 1946 a report on the fire grading of buildings. In this report fire grading was defined as the procedure for assigning to various elements of structure of a building grades of fire resistance as defined in British Standard 476-1932, appropriate to the fire hazard arising from the occupancy according to the height, floor area or cubic capacity of the building. The point was established that the resistance of a unit of construction depended both on the temperature to which it was subjected and the time during which this temperature was applied. This in turn depended on the heat which could be liberated per square foot of floor area of a compartment by the combustion of its contents and any combustible parts of the building itself. This potential heat was called the fire load, and from tables given in the report, it was possible to calculate the fire load of any building.

Acceptable Standards of Construction.

Having decided what grade of resistance was necessary, the architect would find in the report information as to what form of construction complied with that grade. For example, solid 8½-inch brick walls and 4-inch concrete floors would be acceptable for Grade D, and such construction should withstand a fire consuming the contents of the compartment, and also should subsequently withstand the application of a standard jet of water for two minutes.

In general, domestic buildings, hotels, offices, etc., came into Grade D, in which the fire load did not exceed 100,000 B.T.U. per square foot, while trade and factory buildings came into Grade C, with higher fire load. Bulk storage buildings came into Grade B, while Grade A—compliance with a six-hour test—would be applicable to very special risks in which many unfavourable factors existed, such as extremely large stocks of combustible material, absence of fire-fighting facilities, etc.

Separating walls should have four hours resistance. Nine-inch brick gave this and more. Four inches of solid concrete sufficed if made with suitable aggregate and plastered on both sides. If the concrete was reinforced its thickness should be six or seven inches.

Giving some of the more common features of structure which had had an unfavourable effect on fire losses in the past, Mr. Hodges said that in designing and constructing industrial buildings, the architect had regard for the suitability of the accommodation provided for the purpose it was to serve, and he also considered fully the means of escape in case of fire; but in comparatively few cases did he consider how best to lay out his building so as to minimise fire loss.

Mr. Hodges said he believed the whole question of fire resistance would be reviewed in the near future. Meantime, he gave two illustrations of materials from "Fire Research, 1948." One of these was prestressed concrete. In this case it was said, among other things, that further experimental work was needed as to the design of adequate thermal insulation for the concrete, also a closer study should be made of the factors which determined the particular type of failure of prestressed concrete in fires. The other material was a transparent plastic used for roof lights and windows. As the result of tests the fire offices had stipulated that skylights of combustible plastic must be treated as non-standard construction and restricted to 10 per cent. of the roof area, no one roof light exceeding 40 square feet.

Speaking of general construction, the speaker said that fire offices had various grades of fire resistance construction for which discounts were allowed. It was likely these grades would be reviewed in the future, especially as regards exposed structural steel work. At present this was allowed in some external walls, and for the support of floors, although not for party or separating walls; but a Government publication stated that where steel work supported fire-resisting floors, protection of such steelwork was essential. The war had made apparent the fatal effect of unprotected steelwork. For general purposes the fire offices usually required at least two inches of brickwork, although no protection at all was asked for in many cases. In actual practice fire offices had several standards of varying stringency, but as far as whole buildings were concerned there was no nationally accepted definition of fire resistance. A general form of fire-resisting construction had, however, been laid down.

A fire-resisting building must be adequately cut off from an adjoining building by a fire-separating wall. When a building was divided into fire-resisting compartments, and doors were necessary between such compartments, these doors must be fire-resisting. A considerable problem was set in industrial risks by the necessity for holes in party walls for belts, conveyors, trunks, and the like. Trunks for transmitting conditioned air, and chutes for grain, could be of metal, but if they were not to provide weak spots there must be a steel flap or shutter on each side of the wall.

Fire Spread in Multi-Storey Buildings.

In a building of several storeys, not only should the building itself be of incombustible material throughout, but special arrangement should be made to prevent the spread of fire from floor to floor. This would permit the rating of each floor on its merits for fire-insurance purposes. Otherwise the worst occupational hazard in the building would govern the rate for the whole.

Not only must floors be of fire-resisting construction, but they must be effectively separated from each other if the best conditions were to be obtained. Special

attention was required to floor openings. Fire and smoke would travel from one floor to another through such openings, and water would travel down through them. Lift wells and staircases throughout the building should be enclosed according to certain rules, and holes for electric cables, service pipes, etc., must be made good. Chases in walls were an unfavourable feature. The chase communicated fire from floor to floor, and did this in concealed space. Suitable barriers should be provided between floors.

A defect of so-called fire-resisting building arose from the method of construction which erected a reinforced concrete framework carrying fire-resisting floors, and fitted in the spaces of the external walls with panels. When such panels consisted largely of glass, even in metal framing, the result might be serious.

There was a tendency in some classes of building to secure the largest possible open space, so as to facilitate the layout of a continuous process or, as in the case of a departmental store, for the display of goods. In the event of fire, such large undivided cubes, well stocked with goods, would produce something akin to a conflagration. In the County of London and in Liverpool the cube was restricted to 250,000 feet unless the building was sprinklered, but much larger cubes existed elsewhere.

The present tendency in industrial building was to have them all of one storey, with certain exceptions, such as flour mills and breweries. Fire spread more quickly in a vertical than in a horizontal direction, and time was lost getting people out of upper floors. If the fire started at the top there was water damage to the floors below.

Of linings of varnished pitch-pine match-board, Mr. Hodge said these were not so common now as they had been in the past. They were being replaced by building boards. These might not be inflammable, but, like the match-boardings, they concealed spaces in which fire might start and spread. Except plaster-board, they all propagated flame with more or less facility. The need for thermal insulation would ensure the continuance of their use, but the fire loss ratio would be favourably affected if some such material as asbestos cement could be substituted.

Partitions should be of incombustible material, such as steel or glass. The prefabricated house might be said to be almost composed of partitions, and the failure of electricity wire and cable had been the cause of many fires in them. In all these outbreaks the material first ignited had been part of the structure of the house, and the fire had spread to built-in cupboards, floorboards, walls, ceilings or rafters in about one half of the number of incidents.

OBITUARY

Frank L. H. Fleming, F.R.I.B.A.

We announce with regret the death on February 7 at his home at Constantia Nek, Cape, South Africa, of Mr. Frank Leonard Hodgson Fleming, F.R.I.B.A., of Fleming and Partners, Johannesburg. He was elected a fellow of the R.I.B.A., in 1926.

H. B. Bryant.

A memoir of Mr. H. B. Bryant, secretary of B.I.N.C., whose death took place on February 12, is on page 225.

Rupert Jeffries.

We regret to record the death, on February 1, of Mr. Rupert Jeffries, a partner in the firm of Jeffries and Shipley, of King's Court, Bridge-street, Walsall, Staffs. He was 73.

BOOKS

THE KING'S HIGHWAY. By W. Rees Jeffreys, Hon.M.T.P.I. (Batsford.) 18s.

IT was as a cyclist throughout the length and breadth of Great Britain that Rees Jeffreys first became interested in roads, and early in the motor age (1902) he acquired a motor-cycle. More clearly than any other man he foresaw that the new instrument of locomotion could not be accommodated on an irregular pattern of narrow dusty roads which were admittedly inadequate to serve the needs of horse-drawn traffic. The fascination of this volume lies not only in its description of a 50-year fight (even now not nearly won) for better and safe roads, but also in its revelation of the leading part taken in that fight by the author and of his persistence in the face of repeated frustration.

Rees Jeffreys was quick to realise that the obstacle to progress was not lack of ideas, of which he himself had plenty, but rather the inadequacy of the existing machinery of government, with the hidden hand of railway interests and the dead hand of the Treasury in the background. Inadequacy both at central and local government level is a constant theme throughout the volume and is vividly portrayed in the chapters headed "The Story of the Road Board," "Greater London," and "Finance of Roads."

Rees Jeffreys was secretary of the Road Board from its inception in 1910 until he retired at the end of 1918, shortly after which its duties were taken over by the newly-formed Ministry of Transport. The memorandum which accompanied the Bill to set up the Board indicated that the Board might either themselves construct new roads or assist existing highway authorities either to do so or improve existing roads. It also included the statement that "a new road constructed by the Road Board will be primarily a road confined to motor traffic. (Forty years have passed and we still await the construction of such a road.) The Board proved niggardly and unimaginative and achieved little. The author attributes failure mainly to the following factors: The members were pundits in the railway world and in spheres other than roads; the Board had no direct representation in the House of Commons; the Treasury was short-sighted and the Board secretive. The genesis, functions and operations of the Ministry of Transport are also fully described, but here again the author concludes that performance has fallen far short of necessity; "It has failed to provide an adequate and safe road system." The Minister is not in control of his finance; powerful railway interests are in opposition and policy has been governed largely by political considerations.

The road story of Greater London runs from the Royal Commission on London Traffic (1903-5), which led to the setting up of the London Traffic Branch of the Board of Trade, for which the late Col. Hellard made such excellent plans, *via* the Greater London Arterial Road Conferences (1913-16), the Committee on London Traffic (1920-21), the Royal Commission on London Government (1921), the London Traffic Act (1924), Greater London Regional Planning Committee (from 1925 onwards), The London Passenger Transport Act, 1933, the Bressey—Lutyens Plan (1938), the County of London Plan (1943), to the Abercrombie Plan (1944).

Plan after plan was formulated, but little action taken except the implementation by the Ministry of Transport, as a means of meeting unemployment, of most of the roads proposed by the Greater London Arterial Road Conferences. The writer of this review happened to be the organiser of these conferences, in succession to Thomas Adams, M.T.P.I., who resigned shortly after they were formed. When the Ministry of Transport began to arrange for the acquisition of routes prior to construction, the writer pointed out to their engineer, Sir Henry Maybury, the advisability of acquiring a quarter mile wide strip (as the Ministry was entitled to do) mainly in order to prevent ribbon building and the consequent frustration of the purpose for which the roads were to be built. Sir Henry replied that he had taken the matter up with the Treasury but had been informed that "the money had been voted by Parliament for the relief of unemployment, not for speculations in land." With reference to Greater London in general, Rees Jeffreys rightly concludes that no adequate road system is likely to be provided until a Greater London authority is constituted of representatives elected by the county councils and county boroughs (now the planning authorities and also, with the exception of the L.C.C., the road authorities) within the area.

The book is not confined to administrative problems and finance; it also deals with routeing, related to town and country planning, plans for new roads, motorways, design, safety and surfacing. The information provided with reference to these subjects is of great interest, but it is made manifest that nothing resembling a comprehensive road system is likely to emerge until the long overdue overhaul of the machinery of Government has been carried out.

G. L. P.

BRITANNICA BOOK OF THE YEAR 1949. (Encyclopædia Britannica, Limited, 90, Dean-street, London, W.1.) Price £2 10s.

FOR the first time since 1939 Encyclopædia Britannica, Ltd., have published in London the "Britannica Book of the Year," which provides an annual summary of world events of the preceding year. The 1949 book has been compiled by 457 authorities, most of whom are closely engaged in the activities about which they have written.

The historical, political and economic events of 1948 recorded are chiefly notable for the steps taken to end the economic decline in Britain and Europe which was largely the legacy of World War II. The book also records outstanding developments in industry, science, the arts, the humanities, religion, law and sport and contains biographies of the outstanding personalities of the year.

BOOKS RECEIVED

INTRODUCING WOOD. By H. T. Eyres. (London: Sir Isaac Pitman and Sons Ltd.) Price 18s.

TOWARDS AN ORGANIC ARCHITECTURE. By Bruno Zevi. (London: Faber and Faber Ltd.) Price 25s.

PLANNING YOUR HOME FOR TOMORROW. By Morrison Hendry. (London: Faber and Faber Ltd.) Price 18s.

STEEL SQUARE ROOFING. By Alex Smith. (London: Robertson and Mullens Ltd.) Price 30s.

⁂ *Books reviewed in these columns may be obtained on application to the Publisher, "The Builder," 4, Catherine-street, Aldwych, W.C.2. Cash should accompany the order.*

RECORDING MATERIAL PRICES—1

By RALPH E. BULLOCK, A.R.I.C.S., A.I.Arb.

HOWEVER much we may keep the latest prices of basic building materials in our heads, the constant variations and the ever increasing number of special and alternative materials have made it imperative that some sort of price record should also be kept.

Who has not heard questions flung across the office like: "What was the last job on which we used Magnastrip?"—"Who supplies it?"—"Where is their invoice?"—"How long ago was it?"—etc. There is no doubt that the best-kept price records go awry at times; the task of keeping them up to date is formidable and the available staff is always inadequate.

As a quantity surveyor I have always been more interested in rates than prices, but a short while ago I had a special reason to make and maintain a fairly comprehensive record of material prices. It was clear that the method of recording the relatively limited number of prices previously kept would prove inadequate, so it was decided to inaugurate an entirely new system, transfer the old prices to the new records and carry on from there. The problem of price recording is probably sufficiently universal for others to be interested in the difficulties encountered and overcome, particularly as it was decided that capital expenditure in time and effort in designing the new system would be more than repaid by the saving in both by its use.

The Requirement.

It cannot be gainsaid that the first requirement of a price record is that prices shall be found in it quickly, easily and in the form desired. If this were not so, a collection of catalogues, pamphlets and telephone jottings, all thrown into a drawer, would do the trick. Catalogues so often leave out some vital particular such as delivery details, discount, or whether the price is "ex works." Often, too, different suppliers will quote in different terms for the same product; one in yards and one in tons, with neither of them stating the yard/ton relationship. Apart, therefore, from the desirability of seeing that the information is in some semblance of order, it is advisable to copy the prices, when obtained, on to a form which is so designed as to ensure that the incidental intelligence is sorted out then and there, instead of waiting until the prices are wanted to 'phone up for some missing link in the information necessary to use the prices.

Much could be said on the art of inspecting and interpreting prices received, but it is not my object to dilate on that aspect now. The system of recording described later is designed to be as fool-proof as possible, but it does not dispense with the desire that the recording clerk should have a fair knowledge of the trade. Nor is it possible to design one entry form which is equally applicable to all classes of material; I use two types of form each of which is fairly adaptable for different materials and methods of marketing.

In order that the record shall be telescopic or expandable at any point, the forms may be filed in a loose-leaf binder, or printed on cards. I prefer cards for this, although disliking them for most things, because loose-leaf binders take so long to manipulate. There are, of course, some fairly snappy loose-leaf binders available, but they are expensive.

The Order.

For quick reference the cards, or sheets, must be filed in a logical order and there must be some way of keeping them in that order. The system of keeping them in order must be as flexible as the card index itself, capable of allowing any number of extra cards to be inserted at any place without altering the relative position of other cards, capable of showing exactly where any cards should be replaced after removal. It is a real advantage if anyone, without any knowledge of the building trade, could file a card into its correct position once it has been issued.

Three orders were considered: I ALPHABETICAL, II TRADE ORDER, and III MATERIAL ORDER (i.e., keeping the same basic materials together) and the third was chosen for these reasons:—

I ALPHABETICAL is a perfectly flexible method, but many materials have several names and cross referencing becomes clumsy. The estimator may search for a material under one name when it has been filed under another. Also, closely related materials may be miles apart in the deck, and adjacent cards may be ludicrously dissimilar, e.g., Laths, Lavatories, Lead, Linseed oil, Lime and Linoleum.

II TRADE ORDER is the perfect order for rates. It would do, up to a point, for prices of materials, but fails when it comes to the details within a trade and gives no clue as to which trade heading should carry the materials required in several trades. It also demands more knowledge of trade customs from the Keeper of Prices.

III MATERIAL ORDER based on the fundamental composition of the material (i.e., all wood items are kept together, all metal together, etc.), offers a solution. As there is at present no published and generally accepted material order, a logical order must first be worked out in all its divisions and sub-divisions. If this has been well thought out, the subsequent use of the system will be easy, and if in addition a material classification is available for use at the start, then much effort will be saved. The Material Order that we worked out is given later, and may be used as it stands or readily adapted by any who require greater detail in certain materials.

It is not advisable to adhere too closely to the basic composition of the materials, but merely to use the basic composition as a broad framework. We departed from basic composition by including all rigid building boards of whatever material under one main heading and all flexible sheets under another, as will be shown later. The ideal may lie somewhere between the fairly rigid Material Order given here and the normal Trade Order; if in finding that ideal others profit by our experience, then this publication of the system and material classification adopted in my office will have been justified.

Maintaining the Order.

It is one thing to arrange several hundred cards in a prearranged sequence and another to keep them in that sequence while in use. If the total number of cards were constant there would be no problem, because, once arranged, they could be numbered consecutively from 1 to what-you-will. Numbered cards would be so useful, because any cards removed by an estimator for reference could be returned to their places in the deck by an unskilled junior who has only to refer to the numbers. Once numbered it would be easy to cross index, to make an Alphabetical Index, a Trade Order Index, or any other sort of index, to enter on descriptive catalogues the number of the card which bears the latest price of the material illustrated, to facilitate the transfer to the cards of prices published periodically and enable much of the work of keeping the record up to date to be done by clerks whose knowledge of building terms and trade customs is somewhat limited.

We cannot number consecutively from 1 onwards, because we shall want to add cards; we cannot number from 1 onwards and leave initial gaps in the numbers, because we do not know how many more materials will have to be added, nor where. The card index is flexible—"telescopic" was the word used earlier—but the numbering as described would make it rigid and inflexible. Yet numbering is desirable.

Fortunately there is a system of numbering which is as flexible as the card index itself. It is known as the Decimal Classification System. A brief description of the principles of decimal classification would not be out of place.

Decimal Numbering.

Those who are desirous of going fully into the ramifications and possibilities of Decimal Classification should consult B.S. 1,000A "Universal Decimal Classification."* It is designed for libraries to enable all works of reference to be numbered on the same system by all nations adopting the "U.D.C." The U.D.C. number for building materials is 691, but there are few details published in English at present. As the headings so far published show several of the basic numbers taken up by materials that are not in constant use in this country, I felt that, apart from having to wait for details, the U.D.C. numbers would become excessively lengthy if applied to all the minor variations in materials required for a price list. So I have adopted decimal numbering, but it is my own numbering and grouping and not the Universal numbering.

Now for a word about decimal numbering. Every number is assumed to be to the right of an imaginary decimal point, with the result that the amount of digits in a number has no bearing on its order in a file. For instance, just as 3 comes before 4, so 32 comes between 3 and 4, because the order is really .3, .32, .4. In this way, assume that in the course of numbering the numbers 32 and 33 already exist, then if more numbers should be required between 32 and 33, they can be added as 321, 322, etc. The numbers so far considered would be correctly filed in this order:

3
32
321
322
33
4

Instead of imagining a decimal point in front of the numbers the same effect is gained by imagining sufficient noughts after each number to bring all the numbers up to the same quantity of digits, when the correct order becomes apparent:

3	300
32	320
321	321
322	322
33	330
4	400

* British Standards Institution, Sales Dept., 24, Victoria-st., S.W.1. Price (abridged edition) 25s. post free.

In applying the numbers to, say, building materials, it is advisable to divide the materials into a few (not more than nine) main groups, to divide each of these into further major classifications and each of those again into sub-classifications and so on. The first figure in each number will, therefore, stand for one of the main groups, the first two figures for one of the major classifications and a three-figure number for a sub-classification, etc. Some materials may have a six-figure number, but that does not mean that the file will have 100,000 materials, because other materials will only require a two-figure or three-figure number.

As an example, in the grouping we employed, the first figure 3 stands for metals, 31 for ferrous metals, 32 for copper and brass. The ferrous metals classification is broken down into sub-classifications, of which the third is Iron Pipes and Fittings. Here is a sample of numbers and their meanings :

3	Metals
31	Ferrous metals
313	Iron pipes and fittings
3133	Cast iron soil pipe and fittings
313311	L.C.C. pattern soil pipe
313312	Fittings for L.C.C. pattern soil pipes.

The last two are the only numbers for which price cards are issued, the first four numbers quoted merely show how the numbers for L.C.C. soil pipe are derived. There may be a flagged card at the start of the 31 group headed " Ferrous Metals."

It is possible to break up the numbers into defined portions by the addition of decimal points, but these do not alter their relative position. In this way 313312 might be written 31.331.2 signifying that it is of the ferrous metal group, that it is L.C.C. soil pipe and that it covers the fittings for the pipe, *i.e.*, bends, offsets, etc.

It would be possible to break the number down further, *e.g.* :

31.331.21	bends
31.331.211	bends, 3 in.
31.331.212	bends, 4 in.
31.331.22	offsets

But it was decided that it would be simpler to have one card showing all the fittings for a 3-in. pipe and another showing all the fittings for a 4-in. pipe and thus stop the numbering at 313312. The cards for fittings being numbered 313312 (3 in.) and 313312 (4 in.), respectively. The number 31.331.1 covering the pipe itself has only one card which shows the prices of all diameters of L.C.C. coated soil pipe. If it is decided to keep price records of only the 3-in. and 4-in. L.C.C. pipe then only three cards are required, one covering the pipe and two covering the fittings. The length of the number (6 digits) is for ordered filing only and has no bearing on the number of cards used.

Grouping.

Sufficient has been said to show that whereas any number can be added anywhere, the more care that is spent on the original grouping framework the shorter the ultimate numbers will become. Care in the grouping gives a pattern to the whole and makes the record easier to use.

The time taken to head up cards and start recording prices is only a fraction of the time taken to work out the grouping. Our groups together with their numbers are listed below ; first, the Main Groups (single-figure numbers), then the Major Classifications (two-figure numbers), and afterwards some of the detailed Divisions and Sub-divisions.

MAIN GROUPS

1 CONCRETE AND STONE
2 CLAY PRODUCTS
3 METALS AND GLASS
4 WOOD AND COMPOSITE PRODUCTS
5 ASBESTOS PRODUCTS
6 PLASTICS
7 BITUMINOUS COMPOUNDS
8 PAINTS
9 BUILDER'S PLANT

MAJOR CLASSIFICATIONS

together with brief descriptions of the materials covered.

1 CONCRETE AND STONE
11 BINDERS (Cements, limes, plasters).
12 FILLERS (Sand, aggregate, hardcore).
13 WALLING BLOCKS in PRECAST CONCRETE.
14 PRECAST CONCRETE UNITS, FAIR FACED (Floor units, flues, lintols, cills, copings).
15 P.C. CONCRETE, STRUCTURAL UNITS (Beams, panels, hoods, posts).
16 CONCRETE TILES (Roofing, floor, faience).
18 SLATE.
19 NATURAL CUBE STONE.
2 CLAY PRODUCTS
21 BRICKS.
22 TILES, CLAY (Roof, floor and wall tiles).
25 STONEWARE DRAINS (Pipes, channels, gulleys).
27 FLUE ACCESSORIES (Flue linings, fire backs).
28 FIRE SURROUNDS.
29 SANITARY GOODS, GLAZED (Sinks, lavatories, closets).
3 METALS AND GLASS
31 FERROUS METALS (Joists, tubes, rods, fabric, tanks, windows).
32 COPPER AND BRASS (Tube, cylinders, mesh, strip).
33 LEAD (Sheet, pipe, solder).
34 ZINC (Sheet, rainwater goods).
35 ALUMINIUM (Bar, rainwater goods, windows, sinks).
36 IRONMONGERY (Nails, sorews, butts, fastenings, brackets, plugs).
37 ELECTRICAL FITTINGS (Wire, flex, light and power fittings, appliances).
38 ENGINEERING SERVICES (Installations of heating, hot water, electricity, lifts, L.A. charges).
39 GLASS.
4 WOOD AND COMPOSITE PRODUCTS
41 TIMBER, CUBE AND RUN (Fir, hardwood, lathing, mouldings).
42 BOARDING AND SUPERFICIAL ITEMS (Flooring, matching, wood blocks, shingles).
43 WINDOWS, DOORS AND FRAMES.
44 STAIRS AND CUPBOARDS.
45 FENCING AND GATES.
46 BOARDS (Plywood, hardboard, insulating board, plasterboard).
47 FLEXIBLE SHEETS (Felt, scrim, building paper, wallpaper, foil, fibreglass quilt).
5 ASBESTOS CEMENT PRODUCTS
51 SHEET.
52 ROOFING SHEET.
53 TILES (Roofing and floor tiles).
54 MOULDED GOODS (Flue terminals, shaped bath panels).
55 R.W. GOODS (Pipes, gutters and fittings).
56 PRESSURE PIPES.
57 ASBESTOS (Loose, rope, wool).
6 PLASTICS
61 SHEET.
62 PIPE AND FITTINGS.
63 CONDUIT.
64 MOULDED SANITARY GOODS.
65 MOULDED FURNITURE.
7 BITUMINOUS COMPOUNDS
71 TAR.
72 BITUMEN.
73 ASPHALT.
8 PAINTS
81 DISTEMPER.
82 PRIMING.
83 OIL PAINTS, STAINS AND ENAMELS.
84 CONSTITUENTS (Oil, driers, thinners).
86 PRESERVATIVES, TIMBER (Creosote, bituminous paints).
87 PRESERVATIVES, METAL.
88 HEAT-RESISTING AND ANTI-CONDENSATION PAINTS.
89 FILLERS AND ADHESIVES (Putty, size, glue).
9 PLANT
91 SCAFFOLDING.
92 SHEDS.
93 BOARDS, ROPES AND TARPAULINS.
94 SMALL TOOLS.
95 FORMWORK.
97 MECHANICAL PLANT.

All the foregoing classifications are further sub-divided for composition, shape, quality, size, etc., until one gets to the actual specification for which a separate price can be quoted. Some of these, such as Groups 6 and 7, require very little sub-division, whereas others, Classification 31 in particular, require up to five or six more sub-division numbers before one reaches an independent building material. More particulars of the sub-classifications will be given in the next article, but by way of illustration here is the sub-division to two more numbers of the first classification.

11 BINDERS.
111 CEMENTS.
1111 Portland cement.
1112 Rapid hardening cement.
1113 Aluminous cement.
1114 Water-repellent cement.
1115 Coloured cement.
1116 White cement.
1118 Washes.
112 ADDITIVES.
1121 Waterproofers (dry).
1122 Waterproofers (wet).
1123 Foaming agents.
1124 Hardeners.
1125 Accelerators.
1126 Retarders.
1128 Colourings.
113 LIME.
1131 Hydraulic (Blue Lias).
1132 Semi-hydraulic (Greystone).
1133 Non-hydraulic (chalk lime).
1134 Hydrated.
1137 Lime putty.
1138 Ox-hair.
114 PLASTERS.
1142 Plaster of Paris—B.S. 1191 Class A.
1143 Retarded Hemihydrates—Class B.
1144 Anhydrous—Class C.
1145 Keene's or Parian—Class D.
1146 Anhydrite—Class E.

The addition of a further number in some cases is necessary to classify the various trade brands; for example, " Snowcem " is No. 11182. This can be written 11182, or 11.18.2, or 111.82.

It should be again emphasised that the length of the number does not mean that there will be a huge file. No more prices

3131·232 (18') Iron tube fittings HEAVY (Galvanized)

SUPPLIER	DATE			UNIT (Quantities additional as given)	DATE		
	Oct. '49	Jan. '50	Apr. '50		Oct. '49	Jan. '50	Apr. '50
B.B. Coy.				Each			
Pieces 4"–6"	2/9	2/6	2/8	Sockets - plain	1/3	1/3	1/4
" 12"–24"	4/2	3/10	4/-	- diminishing	1/8	1/11	2/-
Barrel nipples	1/8	1/7	1/8	Flanges	3/2	3/7	3/10
				Caps	1/7	1/9	1/11
Bends	4/-	3/8	3/10	Plugs	1/1	1/2	1/3
Springs	2/4	2/8	2/9	Backnuts 10"	10"	11"	4/-
				Nipples 10"	10"	11"	4/-
Elbows - round	3/8	4/-	4/3				
Tees	4/-	4/6	4/8				
Crosses	8/6	9/6	9/9				

TYPE B. RECORD CARD.

need be kept than are required. The numbers ensure a prearranged order into which any amount of additional materials may be added at any time. For instance, I have no prices at the moment for "1113 Aluminous cement," and only two cards in the whole of the classifications from 11211 to 11289. Whereas I know of about twenty trade brands of 1143 Retarded Hemihydrates, I only keep a record of the prices of three of them.

The Record Cards.

One of the two styles of price record card which I use is illustrated here. This is the Type B card. The Type A is similar, but without the series of vertical columns for prices at different dates; the Type A card has only one material on it and the dates are entered down the card instead of across it, thus leaving more space for relevant information such as conditions of delivery. The Type B card, as shown, enables several varieties or sizes of material to be entered on one card and is particularly useful for drains, pipes, pipe fittings, ironmongery and the like.

Both cards have spaces on the reverse for a more detailed specification and description of the properties of the material. Also on the reverse is space for particulars about discounts, names, addresses and telephone numbers of suppliers, whether there is an illustrated catalogue in the office, etc.

Catalogues, brochures and quotations are given the same reference numbers as the price classification. Even omnibus catalogues can be given a number, although the more "omnibus" the catalogue, the shorter the number. A catalogue covering two or more rather distinct groups is given the two or more relevant numbers connected by a colon and is filed by the number shown first, e.g., a catalogue covering sanitary ware and hot water radiators would, if the sanitary ware were the main commodity, have the number 29: 3187 and would be filed before another on, say, British Standard Sections and numbered 312.

Although designed originally for recording material prices, the classification numbers have been a boon for filing catalogues, brochures and pamphlets, and on that score alone they are worthy of consideration.

(To be concluded.)

I.O.W. COUNTY BUILDING SCHOOL

Apprentices' Annual Prize-giving

MR. G. O. SWAYNE, F.I.O.B., chairman of the Apprenticeship and Education Committee of the Southern Counties Federation of Building Trades Employers, on January 30 distributed prizes and certificates to apprentices drawn from the building trades as well as apprentice craftsmen from the large shipbuilding and manufacturing firms of the island who attend the part-time day classes held at the County Building School, East Cowes. The chair was taken by Mr. J. P. Collins, deputising for Mr. G. Moody,

In his report, THE HEADMASTER, Mr. A. I. Fisher, B.Sc., traced the growth of the part-time day classes for training apprentices who attended the school on one day each week. He said that there were 180 of such students enrolled this year. He paid a tribute to the co-operation of the employers and also to the encouragement given by the operatives in the industry.

Target Figure Exceeded.

MR. SWAYNE spoke to the apprentices as a practical builder with a real knowledge of the problems of apprenticeship. He paid a sincere tribute to the Isle of Wight for having exceeded its target figure for the numbers of apprentices in the industry. Further than that, he especially mentioned that the island was one of the few districts in which the numbers entering the different branches of the building trade were very well balanced. He was particularly glad to see that there was a satisfactory proportion of bricklayer apprentices. Although he realised that the Building School had somewhat outgrown its accommodation, he felt that it was very well equipped for its work and was a good example of what a building school should be.

Prizes were distributed to the students who had done best in each grade for each of the various trades. In addition, prizes were distributed on behalf of the Southern Counties Apprenticeship Trust and the Society of Woodworkers.

A vote of thanks to Mr. Swayne was proposed by Mr. N. Downer, and seconded by Mr. F. Lock.

BUILDING IN THE U.S.S.R.

A Swedish Report

A CORRESPONDENT writes: Some idea of working conditions, wages and progress in the building trade under the Soviet Union may be gathered from a report published in the "Stockholm Tidningen," by Mr. Zygmut Wendrownyi, a master builder.

Propaganda from Moscow has recently been active in comparisons between the results obtained in Russian-influenced countries and the non-Communist countries and the Polish housing minister, Mr. Spychalski, at a recent conference in Warsaw announced that "From this date, speed in building is the first priority."

In practice, therefore, various towns and provinces report that groups of three bricklayers laid 18,000 bricks in an eight-hour day, and completed a three-storeyed house in three weeks. This "speed" work was recently demonstrated in Gdynia, in Poland, where the station and adjacent houses are being rebuilt. Three bricklayers from Warsaw, who hold building records, were engaged. On the site were the necessary bricks and mortar for the walls, which were to be two and a half bricks thick. At 8 o'clock the work commenced, and 15 labourers were on the site, one of whom placed the mortar on the bricks; by 10 o'clock 4,050 bricks had been laid, and 13 cubic yards of brickwork completed, so that in eight hours 16,000 bricks would be used. It was noticed, however, that at this rate the same men were unable to work for more than six hours at a time. Before the war in Poland the average rate for bricklayers was 800 bricks per hour, though not, of course, where allowance had to be made for openings for windows, doors, etc. The Russian wireless, however, in announcing, "that Soviet workers, by reason of their love of work for the State, can give results that no democratic country can reproduce," does not mention the 15 labourers, who, of course, reduce the man : bricklaying rate to 800 per hour, nor do they mention the waste of material.

Poor Quality Brickwork.

Houses in the Russian zones of influence are now being built in three weeks and take 3,600 working days to complete. Formerly they took eight months and employed 30 workers, whose working hours amounted to 6,000 working days. Russian propaganda, therefore, reports that such miracles are only possible in the Soviet building trade, with its present-day technique.

It is a moot point whether brickwork which has not had sufficient time to dry out will stand the same wear and tear, and if windows and doors put in at such speed will remain draught-proof and stable.

Wages, of course, as far as local conditions are concerned, are high, a bricklayer earning 20,000 zloty and a labourer 12,000 zloty monthly. A true comparison of wages can, however, only be estimated when the cost of consumer goods is taken into consideration. Thus the average cost of a suit is 19,000 z., a pair of shoes 15,000 z., and the cheapest shirt 4,000 z. Bread costs 45 z. for a 2-lb. loaf, sugar 85 z. per lb., and butter (on the black market) 40 z. Cigarettes are 3 to 5 z. each. Also, the Polish workers' spare time, after working hours, is not entirely at their disposal—they are expected to attend party congresses, mass marches and various propaganda meetings, though these are, of course, labelled "voluntary."

ROAD RESEARCH, 1948

Results Assist British Trading Abroad

OF the investigations on hand at the road research laboratory, those concerned with traffic flow, road surfacings and plant and machinery are particularly important to national productivity. These conclusions followed a review of their work by the Road Research Board reported in "Road Research, 1948," published recently for the D.S.I.R. by H.M.S.O., price 2s. The Board also emphasise the need for more intensive studies of the economics of road construction.

The road research laboratory can assist earnings from abroad. Although the results of research are directly utilised by some exporters, chiefly tar distillers and manufacturers of civil engineering plant, they are also of value in helping civil engineers and contractors in this country to keep abreast of technical developments, and in encouraging engineers overseas to turn to Great Britain for advice and information. Inquiries received by the laboratory have often been the starting point for orders for British firms. Because of the unparalleled scale of public works in hand or projected overseas, and the increasing competition from other countries, the importance of these factors can hardly be exaggerated.

In common with most technical institutions, the laboratory has been severely hampered by the shortage of scientific manpower. This is particularly marked in the work on plant and machinery, which has already shown promise of securing more effective use of the resources of the road-making industry. A survey of methods of spreading chippings for surface dressings, for example, has shown that the productivity of the least efficient unit is only half that of the best. More mechanisation and improved techniques would probably result in substantial savings of labour throughout the industry.

Life of Surface Dressings.

Work on bituminous surfacings has included investigations undertaken in co-operation with the British Road Tar Association. Their objective was the improvement of the weather-resisting properties of home-produced tar. If the average life of a surface dressing, which is the cheapest and the most prevalent form of road maintenance, could be increased from three to four years, there would be an overall saving equivalent to some £3,000,000 a year. Under favourable conditions, surface dressings have been known to remain serviceable for as long as 10 years, so that this objective is a practical possibility.

In the work on traffic flow, where a large amount of data is required to make effective comparisons, the laboratory has been successful in developing a labour-saving technique which makes use of observer cars. These infiltrate into the normal streams of traffic and are fitted with various devices for recording the essential data. The technique has been used in a survey of traffic in central London. Automatic counters actuated by the traffic itself are also in use and show promise of becoming a useful tool to authorities who wish to study conditions in their own areas. In collecting traffic data, the laboratory will always be dependent on assistance from local authorities, some of whom are already helping.

The extent to which highway authorities may gain by collaboration with the laboratory is suggested by the results of some of the preliminary studies of traffic. These have shown that measures taken to improve traffic flow, such as the creation of one-way streets, do not always achieve their objects, and sometimes have the very opposite effect. Of four examples quoted in the report, journey-times were increased in one case, in one there was no change, and in only two cases was there an improvement. "Before and after" studies of this kind are likely to play an increasing part in finding the right solution to traffic problems.

"Zebra" Crossings.

During 1948, "Zebra" pedestrian crossings, which had been developed the previous year on a model scale, were tested on a full scale at a few sites, chiefly in the London area, with the object of studying the effect on the behaviour of drivers and pedestrians. The results indicated that the "Zebra" crossing brought a marked improvement in the behaviour of both. It was accordingly decided to extend the trials by laying the crossings at selected points in a number of provincial towns.

The report refers to the many other investigations covering a wide field of problems ranging from the properties of subsoils and concrete to studies of glazed ice on road surfaces and the performance of snow ploughs. A full account of each investigation is published separately as soon as useful and dependable results are available. The winter sessions of lecture courses at the laboratory were again fully attended and are proving a most valuable means of keeping road engineers and research workers in touch with each other.

COPPER WATER PIPES

Reasons for Corrosion

THE British Non-Ferrous Metals Research Association has for several years been studying the behaviour of copper in supply waters with particular reference to the pitting type of corrosion which occurs occasionally in certain districts, especially in cold water pipes. The number of pipes affected is extremely small compared with the total quantity in service. Recent work has revealed the main cause of this type of corrosion in cold water pipes, and the following statement, based upon the association's own experimental work, coupled with a detailed survey of available service information, is made for the guidance of manufacturers and users of housing tubes:

There is no evidence to establish the superior corrosion resistance of either of the two grades of copper allowed by the British Standards for light gauge copper tubes for water, gas and sanitation (B.S. 659: 1944) and for copper tubes to be buried underground (B.S. 1386: 1947). The information available suggests that the two materials—phosphorus-deoxidised non-arsenical copper (B.S. 1172: 1944) and phosphorus-deoxidised arsenical copper (B.S. 1174: 1944)—are equally satisfactory in service provided they are both free from the carbonaceous films referred to below.

There is strong evidence that the pitting corrosion of copper cold water pipes sometimes experienced in certain waters is usually due to the presence of carbonaceous films which may be produced inside the tubes by some manufacturing conditions.

Pitting corrosion of copper pipes does not occur in the majority of supply waters in this country, even if carbonaceous films are present.

There is as yet no clear evidence concerning the effect of carbonaceous or other films, originally present, on the serviceability of copper tubes in hot water systems.

BUILDING IN SOUTHAMPTON

Results of Industrial Survey

A SURVEY of the industrial prospects of the Southampton region has just been published. It was prepared, at the request of the Borough Council, by Professor P. Ford, Ph.D., B.Sc. (Econ.), and Mr. C. J. Thomas, M.Sc. (Econ.), B.Sc., of the Department of Economics, University College, Southampton. The report says the Southampton region has a building labour force which could, with advantage—if there was no other work in which it could be more effectively employed—be augmented.

The opinion of the authors of the report was that in Southampton alone there was so much building work to be done that it was no exaggeration to say that, were the building labour force to be doubled, there would still be left at the end of 15 years further work which could be profitably undertaken.

The magnitude of Southampton's building programme might be appreciated from the fact that, with the increase of the labour force from less than 100 in 1949 to 300 this year, and eventually to 700, the building of the central shopping area on the scale and style planned would not be completed in ten years' time. More men would enable the work to proceed more quickly, but there was still some way to go before the goal of 700 men was reached.

In connection with central area rebuilding, applications to build new premises were rather slow in coming forward. In addition, innumerable delays were being encountered in connection with site clearances, the obtaining of planning approval, etc. The result had been that the Ministry of Works had considered the extension of the licences of some of the schemes which had already been licensed so as to include the completion of the whole scheme. This was to ensure the full use of the quantity of steel allowed. This position had not changed, and it was not possible to forecast the rate at which the central area rebuilding scheme would proceed in the near future.

The exploration of every useful method of increasing efficiency was called for, and every improvement would be a contribution to Southampton's capacity for carrying through its physical reconstruction.

In the Southampton region in April, 1949, there were 4,200 men on housing and 2,800 on non-housing construction.

In the Borough of Southampton the figures were 2,420 and 1,830 respectively, but, as these figures are based on returns from Southampton Labour Exchange, it is estimated that about 70 per cent. only of those registered in Southampton were employed within the Borough boundary.

A Retirement.

MR. P. W. RAYNER, F.I.A.S., retires this month after nearly 20 years' service as Chief Quantity Surveyor, Works and Buildings Engineers' Department, London Transport Executive.

NEWS IN BRIEF

Painting of Structural Steelwork.

The British Iron and Steel Research Association has recently circulated the second interim report of the Joint Technical Panel J/P1 entitled "Painting of Structural Steelwork."

Employment in December.

The employment figures for December show a decline of 26,000 in the number employed in building and contracting. At the end of that month the total employed was 1,462,000.

Electricity in Converted Houses.

The part played by electricity in the conversion of houses into flats is outlined in an illustrated brochure issued by the British Electrical Development Association, entitled "Electricity Turns Old Houses Into New Flats." The booklet is divided into a number of sections each of which deals with one of the main services to which consideration should be given in planning conversion.

A Resignation.

Mr. Ernest Marples has resigned his directorship in Kirk and Kirk, Ltd. Mr. D. Drewery, who has been a managing director of the company for the past 25 years, is now joined on the board by Mr. Frank Defty. There is no connection between Kirk and Kirk, Ltd., and Marples, Ridgway and Partners, Ltd., of which latter company Mr. Marples is the chairman and managing director.

Experiment in Terrace Housing.

Building of the experimental terrace of houses and flats sponsored by Building Progress Group, Ltd., will commence at Orpington within the next two weeks. Designed by Mr. R. H. A. Jones, A.R.I.B.A., in co-operation with members of the Group, scientists and technical experts associated with the research involved, the first terrace will be built by Davis Estates, Ltd., who are builder members of the Group.

Wood Preservatives and the B.S.I.

The British Standards Institution has approached the British Wood Preserving Association for assistance in the preparation of a further list of wood preservatives in the following categories: (a) copper-chrome, copper-chrome concentrate, fluor-chrome-arsenate, fluor-chrome-arsenate concentrate, fluor-chrome-phenol, and sodium pentachlorphenate; (b) metallic naphthenates and pentachlorphenol.

Manufacturers of preservatives in the above categories, who have not already received a communication from the Association, are requested to write to the Secretary of the B.W.P.A., 75, Cannon-street, E.C.4, giving particulars of the preservatives made by them.

New Officers for Steeplejacks' Federation.

The fourth annual general meeting of the National Federation of Master Steeplejacks and Lightning Conductor Engineers was held in London on February 8.

The following officers were elected: President, A. Beaumont (F. E. Beaumont, Ltd.); vice-president, R. A. Price (R. C. Cutting and Co., Ltd.); council, W. Bacon (Wm. and R. W. Bacon, Ltd.); D. Campbell (J. W. Gray and Son, Ltd.); R. Gibbons (C. Wilson (Steeple Jacks), Ltd.); L. S. Gurney (Goss and Shaw, Ltd.); and S. Larkins (W. Larkins). It was reported that agreement has been reached with the Chief Inspector of Factories for an exemption under the Building (Safety, Health and Welfare) Regulations, 1948, in respect of steeplejacks' scaffolds.

Apprentices Houses.

The opening ceremony of the houses at Mapledene-road, E.8, which have been built under the Master Apprentice Scheme, took place on Saturday, February 11. Sir George Gater, G.C.M.G., was present.

Housing and Manpower.

A circular (24/50) with explanatory memorandum has been issued to local authorities by the Ministry of Health, in which is detailed the revised procedure for submission of proposals to the Ministry. It follows the procedure suggested by the Local Government Manpower Committee, whose proposals were summarised in *The Builder* of February 3.

Expanding Brazil.

Information on opportunities for British building firms in Brazil is contained in an article, "Brazil as a Market," which appears in the current edition of "Scope," a magazine for industry, published by Creative Journals, Ltd. The suggestion is made that the prospects of British suppliers of capital equipment would probably be enhanced if allied industries formed themselves into a group to tender for complete projects, a system which has been successfully adopted by American competitors. Another interesting feature in this edition is the "success story" of the firm of Acrow.

British Standards.

The British Standards Institution has recently issued the following publications:— B.S. 1572, "Colours for Flat Finishes for Wall Decoration," price 2s.; B.S. 876, "Hard Hammers," price 3s. 6d.; B.S. 1615, "Anodic Oxidation Finishes for Aluminium and Aluminium Alloys," price 3s.; B.S. 1586, "Rating and Testing of Open-Type Condensing Units for Refrigeration," price 3s.; B.S. 1608, "Condensing Units for Refrigeration (electrically-driven, open type)," price 2s. Copies of these standards may be obtained from the British Standards Institution, Sales Department, 24, Victoria-street, London, S.W.1.

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"HOUSING BEFORE LUXURY BUILDING"

N.F.B.T.E.'s Policy

Mr. Robert O. Lloyd, O.B.E., F.I.O.B., president of the National Federation of Building Trades Employers, at a meeting of the London Master Builders' Association, in London, on February 9, replied to critics of free enterprise building. He said:—

As it has been suggested recently that the freeing of the private enterprise builder would result in luxury building, I wish to make it quite clear that it has not been and would not be any part of the policy of the N.F.B.T.E. to advocate such building so long as large numbers of families in the middle, as well as in the lower, income-groups were in need of new houses built to good standards.

The Federation's reasons for asking for the sweeping away of the arbitrary ratio which at present allows only one house for owner-occupation to be built for every nine municipal houses, were that this would enable the private enterprise builder to compete with local authorities and thus reduce both the call on public funds and the present high cost of house-building.

We believe that every person in need of a house ought to have the right to choose whether he should buy one for himself or rent a State-subsidised one from a local authority. It is my personal belief that if, within the limitation of materials available for house-building, this free choice was again restored to the people, then those who think that the majority of the British people want to live in council houses would receive a very rude shock.

STAFF PENSIONS

An N.F.B.T.E. Scheme

In the N.F.B.T.E. annual report which was discussed at the National Federation's Annual Meeting on January 26 last, there was once again a note of the progress of the Staff Pension Fund.

This fund is run by the N.F.B.T.E. for the benefit of its members, and it enables all building firms in membership with the National Federation to provide pension and life assurance benefits for their permanent employees. Briefly, the fund enables firms, whatever their size, to provide a pension at age 65 (60 for women) and a life assurance benefit of approximately one year's salary for employees who may die in service before reaching that age. There is also, for men only, a benefit payable in cases of total and permanent disablement whilst in service. The pension varies with the length of service, and increases with rises in salary. The employees contribute to the cost of the pension, and their contributions are deducted from their salaries either weekly or monthly. Firms may also purchase additional pensions in recognition of past service before the date when they became contributing employers to the fund.

Both the firm's contributions and the employees' contributions are allowable as an expense for income tax purposes. One special advantage of the fund is that an employee who leaves the service of a building firm which is a contributing employer and joins another firm which is also a contributing employer suffers no loss of benefits by the change. Inquiries from firms which are members of the National Federation will be welcomed and should be addressed to the Secretary to the Trustees of the Staff Pension Fund, N.F.B.T.E., 82, New Cavendish-street, London, W.1.

RATES FOR PLANT HIRE

Amendments to Second Edition of Schedule

THE second edition (October 3, 1949) of the "Schedule of Rates for Net Cost and Similar Items," in connection with the hire of contractors' plant, as recommended by the Ministry of Works' Plant Hire Rates Committee, has been amended with effect from February 6, 1950. The amendment supersedes the original Schedule and all previous amendments, and revises the rates for drivers' and operators' wages. The amendment states:—

PART I—PREAMBLE.

Part II of the Schedule to the Control of Rates of Hire of Plant Order, 1949 (S.I. 1949 No. 567), paragraph 7(d) states that the cost of fuel, lubricating oil, grease and drivers or operators provided by the owner shall be charged at net cost or an agreed estimate of net cost, and ropes are shown in Part I of the Schedule to that Order as to be paid for as consumable stores. Where it is desired to arrive at such an agreed estimate the following figures are considered to be fair charges; they do not cover fuel.

These rates have no statutory authority; the application of them should be a matter of prior arrangement between the parties concerned.

(i) Drivers' and operators' wages include payment for 44 hours' work per week at Plain Time Rates plus the additional hours customarily paid for site servicing, including starting and greasing machines. The rates cover employers' liability, employers' contributions to National Insurance (including Industrial Injuries Insurance), owners' third party insurance and paid holidays.

(ii) Any hours worked by drivers or operators in excess of 44 hours per week plus site servicing time are chargeable as an extra at net cost; similarly, any sum over and above plain time rates paid to drivers and operators as overtime for any part of the 44 hours which is worked during overtime periods is chargeable as an extra at net cost.

The rates do not cover subsistence allowance paid to the driver or operator.

This Schedule supersedes the Schedule of "All in" Rates issued by the Ministry of Works under reference X/DL/41/2 and subsequently reissued under reference X/DL/42/2, the Schedule of "Clause 7 (d) Rates" issued in April, 1948, and the three subsequent amendments issued on July 5 and August 18, 1948, and February 7, 1949, respectively.

PART II—SCHEDULE OF RATES PER 44-HOUR WEEK.

Machine.	*Lubricating oil and grease.* £ s. d.	*Ropes.* £ s. d.	*Drivers and operators' wages.* £ s. d.	*Hours included for site servicing.*
COMPRESSORS.				
60—150 c.f.	1 10 4	—	7 7 6	6
151—250 c.f.	1 16 10	—	7 7 6	6
DUMPERS.				
2, 2½ and 3 c.y.	1 0 0	—	7 7 6	6
EXCAVATORS.				
¼—⅜	1 9 4	0 19 3	8 12 3	10
½	1 15 10	1 6 3	8 12 3	10
⅝—¾	2 4 6	1 16 0	8 12 3	10
⅞	2 4 6	2 10 2	8 12 3	10
1¼	2 17 6	2 10 2	8 12 3	10
MECHANICAL TRENCHERS.				
12/18 Type	1 7 9	—	8 12 3	10
25 Type	1 17 9	—	8 12 3	10
TRACTORS alone or with Angledozers, Bulldozers, Rippers, Scarifiers or Scrapers.		TRACTOR WITH SCRAPER. *Ropes.*		
35—45 h.p.	1 3 5	0 12 8	8 12 3	10
46—60 h.p.	1 14 1	1 0 0	8 12 3	10
61—90 h.p.	1 17 4	1 0 0	8 12 3	10
91—125 h.p.	2 9 1	1 7 0	8 12 3	10

M.O.H. LOANS

Loans sanctioned by the Minister of Health to local authorities in England and Wales during the quarter ended December 31, 1949, were as follows:—

SERVICE.	£
HOUSING	58,301,268
HEALTH:	
(*a*) *Personal:* Services provided under the National Health Service Act, 1946	260,051
(*b*) *Environmental:*	£
* (i) Water	2,679,629
* (ii) Sewerage and Sewage Disposal	1,925,070
(iii) Refuse Collection and Disposal	73,772
(iv) Recreational	304,923
	4,983,394
NATIONAL ASSISTANCE	354,403
CHILDREN ACT, 1948	185,343
MISCELLANEOUS:	
(*a*) Town Halls, Municipal Offices, etc.	257,977
(*b*) Civic Restaurants	48,062
(*c*) Sea Defence	38,019
*(*d*) Other	618,364
	24,472,428
EDUCATION	625,548
*HIGHWAYS AND PRIVATE STREET WORKS	256,679
POLICE	2,725,344
TOWN AND COUNTRY PLANNING	£93,126,880
TOTAL	

*These are net figures after allowance has been made for capital grants and contributions deducted from capital cost before loan sanction.

BUILDER'S CLAIM FOR W.D. REPAIRS

"Money Properly Expended on House"

"I AM driven to the conclusion that this defence is not a bona fide one. It is an attempt by the defendant to avoid paying out what he knows is due to his builder."

Judge Alun Pugh said this at Bow County Court, on February 10, when he gave judgment for Mr. Roderick Charles Davis, builder, trading as R. C. Davis and Son, of 1, Parsonage-rd., Rainham, Essex, against Mr. Frederick Richard Slade, clerk, of 3, Grove-rd., Leytonstone, for £93 17s., the balance of the cost of war damage repairs done at that address between July, 1948, and April, 1949.

A counter-claim for the return of £123 4s. already paid to plaintiff, for a consideration which it was alleged had wholly failed, was dismissed.

Mr. J. Marnham, for plaintiff, said that, although the house at Grove-road was owned by defendant's mother, the contract was with Mr. Slade. By a verbal agreement, plaintiff was to carry out half the work and to leave the remainder pending payment by the War Damage Commission, whereupon he was to complete the other half. The reason for that was that neither plaintiff nor defendant had any real capital behind them. It was also agreed that money received from the War Damage Commission should be paid direct to plaintiff. The specification finally approved by the Commission amounted to £204. Part of the work was done by September, 1948, and in November £108 17s. was paid by the Commission and the cheque was endorsed over to the plaintiff. Defendant signed a declaration that he was satisfied with the work. The work was finally completed, but, although defendant had received payment of £93 17s. from the Commission, he had refused to give it to plaintiff.

Mr. Marnham said the main dispute was over five ceilings. The specification was for taking down temporary plaster boards which had been put up as first-aid repairs, putting up new ones and plastering over them. Mrs. Slade, the mother of defendant, asked if it was necessary to do all that, so plaintiff agreed to wash off the distemper and plaster over the old boards. That involved plaintiff in just as much work as if he had carried out the terms of the specification. The work was passed by the War Damage Commission.

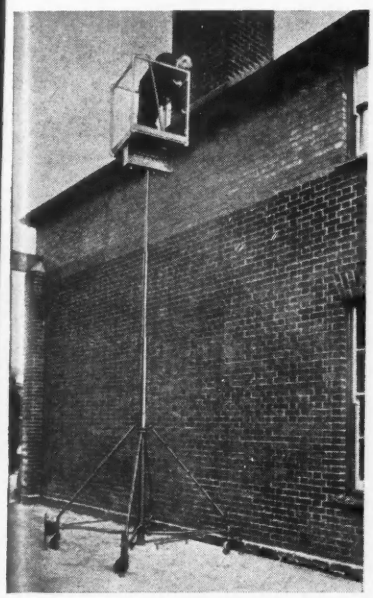
Mr. Lincoln, counsel for defendant, contended that, as the work had not been done according to the specification, plaintiff was not entitled to payment. Plaintiff was under contract to put up new plasterboard. There was a common scheme to get the work "by" the inspector because both wanted the money badly. Mr. Slade never agreed that it should be a permanent variation of the contract. If the work was completed according to the specification, he would pay the balance of the money.

Judge Pugh said he was quite satisfied that Mr. Slade allowed the work to proceed and he was also satisfied from what he had seen of Mr. Davis that he was a perfectly respectable and honest man and that he had in no way overcharged for the work he had done. The money received from the War Damage Commission had been properly expended on the house.

TRADE NEWS

New Hydraulic Mobile Platform.

A new item of building equipment, the "Beanstalk," is announced by the Mechanical Developments Division of William Moss and Sons, Ltd. It is a one-man-operated working platform with a maximum height of 17 ft. This height allows the operator to work at positions of 22 ft. to 23 ft. from the ground. It



can be pushed through an ordinary door and easily manoeuvred in confined passages and gangways. The secret of the tool's performance lies in the use of a triple hydraulic ram and a tubular framework of sturdy construction which "scissors" to permit manoeuvring through confined spaces. The actual platform is 2 ft. 3 in. square and is provided with toe boards and handrails which fold down for transit and movement under arches 6 ft. 6 in. high. A manual hydraulic pump, worked by the operator whilst standing on the platform, gives full elevation in two minutes; descent is effected in 45 seconds. Rubber tyred castors provide mobility from point to point and when in operation four screw jacks give a firm foundation even on a sloping floor. Full particulars may be obtained from William Moss and Sons, Ltd., Mechanical Developments Division, North Circular-road, Cricklewood, London, N.W.2.

30 cwt. Angledozer.

H. A. Saunders, Ltd., 836-842, High-road, North Finchley, N.12, concessionaires for the M.R. Bristol "20" Angledozer, inform us that the manufacturers are going ahead with the design of various items of equipment which, they claim, will make it into an implement suitable for the large and small builder. Of these a 7 cu. ft. concrete skip and a scarifier are already on the market. A one yard scraper and an 8 cwt. swing-jib crane will soon be in production and further attachments will be available shortly. The Angledozer is powered with an Austin 16 industrial engine developing 22 b.h.p. at 1,500 revs. It weighs 30 cwt. and can be transported, so the makers claim, on any 2-ton truck. Further information can be obtained from the above address.

Exhibition of Technical Literature.

An exhibition of I.C.I.'s technical literature will be on view at the Academy Cinema Exhibition Hall, Oxford-street, W.1 (near Oxford Circus), from March 6-17.

Change of Address.

We have been informed that Insulite Products Corporation, Ltd., will be moving their head office on February 25, and as from that date their new address will be 41, Kingsway, London, W.C.2. Tel.: Temple Bar 9385/6/7.

New Zinc Bulletin.

A new Zinc Bulletin, No. 7, has been issued by the Zinc Development Association, Lincoln House, Turl-street, Oxford. Included in this issue is an article on lithopone, the commonest commercial form of zinc sulphide, and its importance in modern industry is stressed. Also given is a glossary of terms used in hot dip galvanising. Copies of this bulletin may be obtained on request from the Association.

Use of Aerated Concrete.

The building technique called "Situfoam," devised by George Wimpey and Co., Ltd., which consists primarily of forming aerated concrete from foamed cement and local sand, for fabrication in situ, is now being applied on contracts in the Far East and Persian Gulf. The shuttering used for the form-work is made of extruded "Duralumin" light alloy sections manufactured by James Booth and Co., Ltd. The lightness of this alloy has cut down shipping costs considerably. It has been found that oxidation of the alloy takes place when in contact with concrete, but that after several uses a hard patina forms, preventing further oxidation and giving a good finish.

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LONDON BUILDERS' FOREMEN

Building (Safety, Health and Welfare) Regulations, 1948

SPEAKING on the Building Regulations, 1948, at a monthly meeting of members of the London Builders' Foremen's Association, on February 3, MR. W. D. SHORT, H.M. Inspector of Factories, said:—

The Building Regulations, 1948, are designed mainly for the prevention of accidents in one of the largest and most complicated trades in the country, and one with a bad accident record. Over 1,000,000 people are employed in it, and every year about 10,000 serious accidents, of which some 250 are fatal, are reported, as they have to be by law, to H.M. Inspectors of Factories. The Regulations apply to every type of work; nothing is too small, nothing too large.

Classification of the accidents shows that the most frequent types are those where men fall from a height or where something falls from a height and causes injury. The way to stop man-falling is shown in Part II, the section dealing with Scaffolding and Access. Scaffolding must be of good material, be properly erected and regularly inspected by a competent person. When over 6 ft. 6 in. high, guard-rails and toeboards must be provided, and the platforms must have minimum specified widths. (Regulation 22.) Nothing less than 17 in. is allowed. Proper crawling ladders, etc., must be provided for roof work, and catch platforms must be provided at the eaves.

Ladders must be good and always be tied to prevent slipping, if practicable. Trestle platforms must not be more than 15 ft. high. Bracket scaffolds held by "grapplers" are prohibited. Watch for faulty timber. When hoisting materials, even light loads on a gin wheel, the wheel, its supports, the tackle and the load must be safe and secure. Riding on platform hoists is prohibited, and these machines must be guarded. Excavations over 4 ft. deep must have supports for the sides—unless there is absolutely no risk of a cave-in. Holes over 6 ft. 6 in. deep must be fenced.

These Regulations are useless unless all parts of the trade co-operate. They mean more work for everyone, but accident prevention is worth an effort. H.M. Inspectors of Factories are anxious to help. Study the Regulations, so do your best to comply—and get others to do so, too—and then if you want help, ask the inspectors.

Productivity Through Incentives.

Among an interesting series of practical articles appearing in the February issue of *Business*, the Journal of Management in Industry, specialist contributors examine recent actual case histories of successful production-increasing incentive schemes. Philip F. Dyer examines the efforts of the N.F.B.T.E. to reach agreement on incentive schemes with the building trade unions. The more important of seven categories of incentive schemes are outlined, with diagrammatic examples of some of the necessary target cost computation, operational time sheet and abstract and summary forms. Robert Spark takes the case of the British Reinforced Concrete Engineering Co., Ltd., of Stafford, and outlines a payment-by-results scheme which, operating since 1948, resulted in an increase in output and in an average rise of at least £1 for the workmen concerned.

THE SCOTTISH BUILDER

Housing: Value of Non-Traditional Methods

THE preparation of additional housing sites, the submission of outstanding tenders and the inclusion of a proportion of non-traditional houses in housing schemes were discussed at a meeting in St. Andrew's House on February 7 between officials of the Department of Health for Scotland and representatives of 12 local authorities in the East and South-East of Scotland.

An official of the Department pointed out the need for the preparation of additional housing sites, if the present rate of construction was to be maintained. The representatives of the local authorities appreciated this need and agreed that where possible steps should be taken to have additional work of this kind undertaken with the minimum of delay. After discussion about the submission of outstanding tenders for houses, the local authorities represented agreed to do everything possible to have these tenders submitted to the Department by the end of March.

On the basis of the experience gained in 1949, a Department of Health official said it was clear that non-traditional houses were being completed much quicker than traditional houses. Accordingly it seemed important that if the present rate of construction was to be maintained, local authorities should continue to include a proportion of non-traditional houses in their schemes. The majority of the representatives indicated that their authorities would be prepared to co-operate in this matter.

NEW BUILDINGS

Dundee.—Plans to be prepared for the Royal Institute of the Blind, Maulden Yard-rd., in connection with the new bedding factory to be erected at Paton's-la., and for which the architects are Thoms & Wilkie, 21, South Tay-st., Dundee, Angus.

Glasgow.—Plans to be prepared for offices, etc., and also garage, to be erected for Taggarts (Glasgow), Ltd., Broomielaw, to be erected at Pollockshaws-rd., and for which the principal contractors are Bone, Connel & Baxter, Ltd., Netherton Works, Motherwell-Wishaw.

Glasgow.—Plans to be prepared for school buildings at Lauderdale-gdns. and Novar-dr., Kelvinside, for which the architect is John MacNab, 129, Bath-st., Glasgow, W.C.3.—Plans to be prepared for 26 houses at Napier-st., for which the architect is Mr. Archibald G. Jury, Council Housing-bldgs., Glasgow Cross, The Trongate, Glasgow, E.C.1.

Lanarkshire.—Plans to be prepared for housing scheme for Scottish Special Housing Association, Ltd., 15 to 21, Palmerston-pl., West End, Edinburgh, at Toryglen.

Overtown.—Lanarkshire C.C. to erect houses from plans to be prepared by Samuel MacColl, County-bldgs., Beckford-st., Hamilton.

FUTURE CONSTRUCTION

PUBLIC APPOINTMENTS

Full details of Public Appointments open will be found in the Advertisement pages of this and previous issues.

CONTRACTS OPEN

For some contracts still open but not included in this list see previous issues. Those with an asterisk are advertised in this number. The dates at the heads of paragraphs are those for the submission of tenders; a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING

FEBRUARY 22.

***Bath T.C.**—Adaptation of Mount Beacon House as hostel for aged persons. Alfred J Taylor & Partners, 4 and 5, Bridge-st., Bath. Dep. £2 2s.

†**Barrow-in-Furness C.B.**—Junior school at South Newbarns estate. T.C., Town Hall. Dep. £3 3s

***Norfolk E.C.**—Sanitary improvements, King Edward VII Grammar School, King's Lynn. W. O. Bell, Chief Ed. Officer, Stracey-rd., Norwich. Dep. £2.

†**Tottenham B.C.**—82 dwellings (2nd stage) and 53 dwellings (3rd stage) at Park-la., Cheshunt. B.E. & S., Town Hall. Dep. £2 2s.

FEBRUARY 24.

†***Royston U.D.C.**—12 houses, Old North-rd. site. Manger & May, architects, Parkway-chbrs., Welwyn Garden City. Dep. £2 2s.

†***South Western Regional Hospital Board.**—Erection of Occupational Therapy block at Tone Vale Hospital. Donati & Torrens (AA.), 31, Bridge-st., Taunton. Dep. £5 5s. Tenders by March 14.

†***Wandsworth B.C.**—Six flats at Hopton-rd., Streatham. T.C., Municipal-bldgs., S.W.18.

FEBRUARY 25.

†***Essex C.C.**—General repairs and renovations at Epping Voluntary Secondary School. County A.

†**Higham and Ferrers B.C.**—Erection of 18 houses. Gotch, Saunders & Surridge, architects, Bank-chbrs., Kettering.

†***Lothingland R.D.C.**—Eight houses at 2 sites. C., Council Offices, Rectory-rd., Lowestoft. Dep. £2 2s. Tenders by March 13.

†***Royal Leamington Spa B.C.**—42 houses at Tachbrook-rd. T.C., Town Hall.

FEBRUARY 27.

***Glanford Brigg R.D.C.**—Eight houses, Scawby. Butterick & Butterick, F/A., 43, Oswald-rd., Scunthorpe. Dep. £2.

†***Torquay B.C.**—70 houses at Marldon-rd. estate. B.S., Town Hall. Dep. £5 5s.

***Wakefield T.C.**—Branch library at Woodcock-st., Sandal. City E. Room 33, Town Hall.

FEBRUARY 28.

†***Bilston T.C.**—64 houses at George-st., North, contract No. 158; 62 2-storey flats at Stowlawn, contract No. 159. Boro' A., 20, Wellington-rd. Dep. £2 2s. each contract.

†***Birmingham T.C.**—Superstructure for first section of Colleges for Technical, Commercial and Art Education. Chief Ed. Officer, Council House, Margaret-st. Dep. £5 5s. Tenders by April 12.

†***Newcastle-upon-Tyne Regional Hospital Board.**—Conversion of E.M.S. wards at St. Mary's Hospital, Stannington, into accommodation for patients and staff. E. B. Jenkins, Secretary, "Dunira," Osborne-rd., Newcastle-upon-Tyne, 2.

MARCH 1.

†***Bucks C.C.**—Conversion of existing stables into boys' dormitories and erection of sanitary accommodation at Wolverton House. County A., County Offices, Aylesbury. Dep. £2 2s. Tenders by April 3.

***Chesterfield R.D.C.**—20 houses at Hillyfields, North Wingfield, and 12 at Wingfield-rd., Tupton. J. B. Wikeley, A.M.Inst., C.E., E. & S., Rural Council House, Saltergate, Chesterfield. Dep. £2 2s. each site.

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Depwade R.D.C.—28 houses at various sites, A. F. Scott & Sons, architects, 23, Tombland, Norwich. Dep. £3.

Doncaster C.B.—Erection of 12 bungalows, Intake estate. Estates Surveyor, 15, Southparade, Doncaster. Dep. £3 3s.

†***Douglas (I. of M.).**—New nurses' home on the Hospital site, Westmoreland-rd. E. C. Kneale, Secretary, Noble's (I. of M.) Hospital and Dispensary, Douglas.

†**Godmanchester B.C.**—Erection of 10 houses, The Grove estate. Lea, Milner, Doe & Wardley, architects, 4, Market-hill, Huntingdon. Dep. £1 1s.

†***Norfolk E.C.**—Timber hut, additional lavatories and washbasins, etc., at Little Snoring County Primary School. W. O. Bell, Chief Ed. Officer, Stracey-rd., Norwich. Dep. £2.

Pontardawe R.D.C.—Reconstruction of Ynysgeinon Bridge, Ystalyfera. E. & S., Council Offices, Pontardawe, Glam. Dep. £2 2s.

MARCH 2.

Cleethorpes B.C.—40 flats and 10 houses on Highgate housing site No. 4. B.E. & S., Council House. Dep. £2 2s.

***Newbury T.C.**—Garage and repairs shop at Corporation Depot, Queen's-rd. B.S. & Water E., Municipal-bldgs. Dep. £2.

MARCH 3.

†***East Sussex C.C.**—Adaptation of Park House, Hove Park-gdns., Hove, into Home for the Aged. County A., County Hall, Lewes. Tenders by March 27.

†***East Sussex C.C.**—Adaptation of The Grey Friars, Winchelsea, into Home for the Aged. County A., County Hall, Lewes. Tenders by March 27.

†***Hampstead B.C.**—Eight dwellings at Agamemnon-rd. T.C., Town Hall.

***Lincoln (Parts of Lindsey) C.C.**—Alterations and additions at Farm Institute, Riseholme Hall and Grange. Brewill Son & Nunn (A.), Armitage-chbrs., Victora-st., Nottingham. Dep. £2 2s.

MARCH 4.

***Oldham C.B.**—36 bungalows for aged persons at Limeside estate. Cameron & Middleton, A.R.I.C.S., 32, Deansgate, Manchester, 3. Dep. £2 2s.

†***Paignton U.D.C.**—90 houses in 2 contracts at Foxhole estate. C., Municipal Offices. Dep. £2 2s. each contract.

MARCH 6.

†***Camberwell B.C.**—Repairs and redecoration works. B.E. & S., Town Hall.

***Orpington U.D.C.**—Alterations and additions to Civic Hall. E. & S., Council Offices. Dep. £2 2s.

Port St. Mary, Isle of Man, Town Commissioners.—Erection of 18 dwellings, including road and sewers work, off Queen's-rd. Kay & Gill, architects, 22, Athol-st., Douglas. Dep. £2 2s.

***Swanage U.D.C.**—Public convenience at Battle Gate. S. & Water E., Town Hall. Dep. £2 2s.

†***West Sussex C.C.**—Adaptations for additional accommodation at Home for the Blind, Worthing. County A., County Hall, Chichester.

MARCH 8.

Coventry T.C.—Construction of reinforced concrete bridge, Hall Green-rd., Bell Green. City Engineer's Dept., Earl-st., Coventry. Dep £5 5s.

MARCH 9.

***Nottingham T.C.**—Assembly hall and kitchen and dining-room at Wigman-rd. Infants' School, Bilborough. City E. & S., Guildhall. Dep. £2.

MARCH 10.

***Tipton T.C.**—92 houses at Roberts Field site. Housing A., Municipal-bldgs. Dep. £3 3s.

MARCH 11.

Brecknock R.D.C.—Six houses at Trecastle. J. Merton Jones, architect, St. Mary's-chbrs., Abergavenny. Dep. £3 3s.

Holyhead, Anglesey, U.D.C.—Erection of 22 houses, London-rd. (site No. 2). R. E. Price, Housing A., Town Hall, Holyhead. Dep. £5 5s.

MARCH 13.

†***Anglesey C.C.**—Additions and alterations at Llys y Cwynt, Holyhead, to form home for aged. County A., Shire Hall, Llangefni. Dep. £2 2s. Tenders by March 27.

***Walsall C.B.**—80 houses in 2 contracts at Little Bloxwich North. B.E. & S., Council House. Dep. £3 3s.

MARCH 14.

†***Coventry T.C.**—60 flats and 292 houses, bungalows and flatlets with roads and sewers at Manor House estate. T.C., Council House.

***Macclesfield T.C.**—Reconstruction of slipper baths, Davenport-st. Boro' A., 3, Jordangate. Dep. £2 2s.

MARCH 15.

Bolton T.C.—20 bungalows on the Breightmet Hall estate. Housing Director, Town Hall. Dep. £1 1s.

***Camberwell B.C.**—54 dwellings at Cator-st. and East Surrey-gr., permanent housing site No. 6. T.C., Town Hall, Peckham-rd., S.E.5. Dep. £2 2s.

***Horncastle U.D.C.**—40 houses and site works between Boston-rd. and Mareham-rd. Wm. Saunders & Partners, 24, Castle Gate, Newark-

on-Trent, or 14, Mercer-row, Louth, Lincs. Dep. £3 3s.

MARCH 17.

***Barnes T.C.**—16 flats at Ranelagh-gdns., Rocks-la. B.E. & S., Municipal Offices, Sheen-la., S.W.14. Dep. £2.

MARCH 18.

***Wycombe R.D.C.**—30 houses and bungalows at Bourne End site. J. M. Smith (F.), Architect & S., 100, Easton-st., High Wycombe, Bucks. Dep. £5 5s. to Chief Financial Officer, 17, High-st., High Wycombe.

MARCH 23.

***Torrington R.D.C.**—12 houses at 4 sites. Oliver & Dyer (F.), Queen Anne's-chbrs., Barnstaple. Dep. £3 3s.

MARCH 27.

***Salford T.C.**—263 flats and 4 shops at Eccles New-rd. City E., Town Hall. Dep. £5 5s.

NO DATE.

***Herefordshire C.C.**—New fire brigade headquarters. C., Shirehall, Hereford.

PAINTING, ELECTRIC LIGHTING, MATERIALS, ETC.

FEBRUARY 25.

Oldbury B.C.—E. & S. (Materials).

FEBRUARY 27.

Barking B.C.—B.E. & S., Town Hall. (Materials).

MARCH 4.

Brentwood U.D.C.—E. & S. Council Offices (Materials).

Walton and Weybridge U.D.C.—E. & S. (Materials).

MARCH 6.

***Liverpool Corporation Water Works.**—External painting of various premises. Water E., 55, Dale-st.

MARCH 7.

Hereford C.—S. (Materials).

MARCH 8.

Stepney B.C.—E. & S. (Materials)

MARCH 9.

Burgess Hill U.D.C.—E. & S. (Materials).

MARCH 11.

Wellingborough U.D.C.—E. & S. (Materials).

MARCH 14.

Berwick-upon-Tweed C.C.—Boro' S., Municipal-bldgs. (Materials).

MARCH 15.

Cannock U.D.C.—E. & S. (Materials).
Stepney B.C.—E. & S. (Materials)
Wortley R.D.C.—E. & S. (Materials).

ROADS, SEWERAGE AND WATER WORKS

FEBRUARY 23.

†**Basildon Development Corporation.**—Development of estate roads and sewers. General Manager, Basildon Development Corporation, Gifford House, Pitsea, Essex.

FEBRUARY 27.

West Hartlepool C.B.—Construction of streets. B.E., Municipal-bldgs. Dep. £5.

FEBRUARY 28.

Bilston B.C.—Laying and jointing of water mains at Bilston, Coseley and Seisdon. S. & W.E., 20, Wellington-rd., Bilston. Dep. £2 2s.

Ilford B.C.—Making-up and paving of Harewood-dr. B.E. & S., Town Hall. Dep. £2 2s.

Ilford B.C.—Making-up and paving of Middleton-gdns. B.E. & S., Town Hall. Dep. £2 2s.

Walthamstow B.C.—Construction of roads and sewers on the Billet-rd/Folley-la. housing estate. B.E. & S., Town Hall. Dep. £2 2s.

MARCH 1.

Sutton Coldfield B.C.—Surface dressing of roads. S., Council House, Sutton Coldfield. Dep. £1.

MARCH 2.

Leeds C.—Road works in 5 streets. Highways Engineer, 155, Kirkstall-rd., Leeds, 4. Dep £1 1s.

MARCH 6.

Cheshire C.C.—Construction of outfall surface water drain. County S., Backford Hall, nr. Chester. Dep. £2.

Rochdale C.B.—Road works. S., Town Hall, Rochdale. Dep. £2 2s.

Stafford B.C.—Laying and jointing of water pipes, valves and special castings. G. J. Plant, A.M.Inst.C.E., W.E., Mount-st., Stafford. Dep. £5 5s.

MARCH 7.

Berkhampstead R.D.C.—Making-up of Prince Edward-st. and Shrublands-rd. Robert E. Hulse, M.I.Mun.E., E. & S., Civic Centre, Berkhampstead. Dep. £2 2s.

***Rhondda U.D.C.**—Roads and sewers for approx. 160 houses, rear of Richard-st., Maerdy. C. Gingell, Housing A., 13, Ystrad-rd., Pentre, Rhondda. Dep. £3 3s.

MARCH 8.

Shaftesbury R.D.C.—400,000-gallon reinforced concrete covered reservoir at Kingston Magna. A. J. Allen, F.R.I.C.S., Half Moon-st., Sherborne, Dorset. Dep. £4 4s.

MARCH 9.

Cumberland C.C.—Surface dressing of 800,000 sq. yds. of county roads during 1950. County S. & Bridgemaster, Citadel-chbrs., Carlisle.

Twickenham B.C.—Laying sewers at Eel Pie Island. B.E. & S., Municipal Offices. Dep. £2.

MARCH 10.

Cirencester R.D.C.—Construction of water mains at Meysey and Hampton. A. H. S. Waters, M.I.C.E., engineer, 25, Temple-row, Birmingham, 2. Dep. £3 3s.

MARCH 11.

Faringdon R.D.C.—Construction of mass concrete (partly reinforced) reservoir. K. M. Hart, F.R.I.C.S., M.I.Mun.E., E. & S., Council Offices, Market-pl., Faringdon, Berks. Dep. £2 2s.

***Wycombe R.D.C.**—Roads and sewers, Kimble housing site. J. M. Smith (F.), 100, Easton-st., High Wycombe. Dep. £3 3s.

MARCH 13.

Depwade R.D.C.—Reinforced concrete water tower of 265,000 gallons capacity at Pulham-market. A. P. I. Cotterell & Son, 54, Victoria-st., Westminster, S.W.1. Dep. £2 2s.

Stevenage U.D.C.—Making-up of Pound-ave. S., Council Offices, Stevenage, Herts. Dep £2 2s.

MARCH 14.

Berwick-upon-Tweed C.C.—Surface dressing of district roads. Boro' S., Municipal-bldgs.

MARCH 15.

Lancaster C.C.—Construction of water main from Brock-st. to Willow-la. area. City W.E., Town Hall. Dep. £2 2s.

Prestwich B.C.—Making-up of Lowther-rd. (scheme A) and Carlton-ave. E. & S., Town Hall, Prestwich. Dep. £3 3s. each contract.

MARCH 22.

Winchester R.D.C.—37 miles of spun-iron water mains and reinforced concrete reservoirs of 100,000 and 500,000 gallons capacity. Lemon & Blizard, 59, Tufton-st., Westminster, S.W.1. Dep. £5 5s.

MARCH 27.

North Devon Water Board.—Construction of an impounding reservoir at Wistlandpound. Rofe & Raffety, chartered civil engineers, 7, Victoria-st., Westminster, S.W.1. Dep. £2 2s.

GENERAL BUILDING WORK

(LONDON)

Brentford and Chiswick.—FLATS.—B.C. have approved the draft lay-out plans, prepared by the Middlesex county planning officer, for the erection of 165 flats in the Walnut Tree-rd. area redevelopment scheme.

Camberwell.—FLATS.—L.C.C. to erect 43 flats on the Camberwell-rd. site. Plans by Council's housing architects.

Croydon.—SPORTS STADIUM.—Parks comm. are examining a proposal to erect a sports stadium within the borough to hold 20,000 people. The estimated cost is between £50,000 and £100,000. No architect has yet been appointed.

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Tottenham.—FLATS.—Preliminary sketch plans have been prepared by council's architects' dept. for erection of 16 two-bedroom flats on Reynaudson's Almshouses site.

Tottenham. — HOUSES. — Council's architects' dept. has prepared plans for four houses at Chalgrove-rd. to cost £5,489.

Tottenham.—HOUSES.—Corporation propose 42 houses at Cheshunt at estimated cost of £53,992. Plans by council's architects' dept.

Wembley.—OFFICES.—J. M. Hill & Sons, Ltd., builders, North Circular-rd., Stonebridge Park, propose to erect an office building on north side of Heather Park-dr.

Wembley.—CHURCH AND CHURCH HALL.—C. A. Farey, Son & Adams, F. & A.R.I.B.A., 83, Prince Albert-rd., N.W.8, architects for church and church hall at Roe Green junction with Bacon-la.

(PROVINCIAL)

Ashington.—Alterations and additions are proposed to Ashington Y.M.C.A. buildings.

Ashton-under-Lyne.—B.C. propose extensions to institute premises at Transport Depot; approved plans for extensions to Broadoak County Infants' School, and a new school, Norman-rd., for Cheshire E.C. F. Mainwaring Parkes, County A.

Bakewell.—R.D.C. propose houses, Calver 4, Elton 6, Eyam Woodlands 6, Stoney Middleton 6, Bradwell 6, Hathersage 6, Tideswell 6, Youlgreave 6. Surveyor, R. Hayhurst.

Bilston.—T.C. propose 16 2-storey blocks of flats. Plans by surveyor, F. B. Sidwick.

Birkenhead.—B.C. approved office and stores, 25, Oxton-rd., for James McKenzie, Ltd. Architects, R. Owens & Sons, Ltd., 11, Westminster-chbrs., Liverpool; reconstruction and extensions to factory, Cleveland-st., for Darlington, Kenyon & Scott, Ltd., architects, Quiggin & Gee, Harley-bldgs., Old Hall-st., Liverpool.

Blackpool.—Plans submitted to T.C. for:—Office and store, Mowbray-dr., for J. T. Ellis, 1, Boulevard, St. Annes-on-Sea; extension to factory, Stanmore-ave., for W. G. Ellis, 66, Stoney-Hill-ave.; erection of first floor and alterations to factory, Chiswick-gr., for Dental Manufacturing Co., Ltd., Preston New-rd.; alterations to café and conversion into 3 shops of premises at Promenade for Metropole Hotel, Ltd., London; shirt factory, Collins-ave., for S. Johnson; shops and offices, Temple-st., for N. & R. Gill, 19, Ansdell-rd. South, Lytham St. Annes; B.C. approved scheme for conversion of four existing slaughterhouses into cooling room at £5,300; approved in principle repairs to abattoirs at £5,251.

Blackpool.—T.C. propose maternity and child welfare centre, St. Walburgas-rd. Boro' E., A. S. Hamilton.

Blyth.—Robert Deuchar, Ltd., Newcastle-on-Tyne, wine and spirit merchants, are planning erection of public-house, Links-rd.

Bolton.—B.C. approved plans for:—12 houses and block of flats, Harpers-la., Beechfield-rd. and Knowsley-rd. for Housing Comm.; 20 bungalows, Winchester-way, Colchester-ave. and Lydgate-ave. for Housing Comm.; additions and alterations, Rothwell-st., for Crumblehulme, Ltd.; extension to engineering works and new office block, Tildesley-st., for T. Alberts & Son; alterations and additions to "Seven Stars" Inn, Radcliffe-rd., for Howcrofts Brewery (Bolton), Ltd.; 2 covered gangways, Mill Hill-st., for Mill Hill Spinning Co., Ltd.; sanitary block and loading bay off Northfield-st. (Bannfield Mill), for Tootal Broadhurst, Lee & Co., Ltd.; extensions, Model Brewery, Spa-rd., for Howcrofts Brewery (Bolton), Ltd.; 2 storage buildings, Pilot Works, Manchester-rd., for Pilot Works, Ltd.; alterations at Deansgate for Marks & Spencer, Ltd.; extensions to cotton store, Hill Fold Mill, Broad 'o th' Lane, for W. A. Openshaw & Co., Ltd.

Bolton.—B.C. approved plans for:—Extensions, Springfield-rd., Astley Bridge, for Wolstenholme Bronze Powers, Ltd.; extensions, Holly-st., for Philipson & Co. (Bolton), Ltd.; approved in principle plans by Boro' E. for conversion of Nos. 11 and 12 at Hollins Cottage Homes as reception centre; 2 blocks of 3-storey flats, Hawthorne-rd.; approved expenditure of £11,500 for slipper baths, Hennor-st.

Bradford.—E.C. approved erection of new infants' school at £48,000. Plans by Deputy City A., W. C. Brown.

Brixworth.—R.D.C. propose houses, 8, Cold Ashley; 16, Moulton; 6, Old; and 20, Welford. Surveyor, F. A. Russell.

Carlisle.—Plans for extending Carlisle General Hospital and City Maternity Hospital are to be considered by Newcastle-on-Tyne Regional Hospital Board. Cost has been estimated at £300,000.

Chelmsford.—R.D.C. proposes dwellings as follows: Danbury, Pedlars Path, 9; East Hanningfield, near the Church, 5; Great and Little Leighs, near St. Anne's Castle, 4; Roxwell, the Village, 6; Great Waltham, South-st., 9; Writtle, Victoria-rd., 11.

Chester.—T.C. to lease land at Sealand Trading estate to M.O.W., for G.P.O. engineering depot and garage; received M.H. approval for 48 houses and two bungalows at Blacon.

Chesterfield.—T.C. approved layout for 92 houses, Newbold estate.

Chorley.—R.D.C. propose houses:—12 at Wheelton; seven, Heath; 10, Charnock; 10 Anderton; four Charnock Rupard. Surveyor, W. Groves

Coventry.—T.C. propose large new wholesale vegetable, fruit and fish market, Barras Heath. D. E. E. Gibson, City A.

Cranbrook (Kent).—R.D.C. proposes dwellings as follows: Freight-la., Cranbrook, 18; Sissinghurst (Coal Yard site), 10; Benenden (Main-rd. site), 12; Hawkhurst (Horns-rd. laundry site), 8.

Darlington.—E.C. acquired two acres for extending St. William's R.C. School. Moore Bros. are planning erection of garage and buildings for preparation of wet fish, Bowman-st. Additions are proposed, King-st., for Tees-side Farmers, Ltd.

Derbyshire.—C.C. received M.H. approval for adaptation of "Whitestones," Manchester-rd., Chapel-en-le-Frith, and "The Elms," Chapel-en-le-Frith as hostels for the aged. Projects in 1950 programme: Darley Dale Junior School (£35,250); Chapel-en-le-Frith Sec. School (£46,350); and Buxton Harpur School (£32,370), County A., F. H. Crossley.

Dewsbury.—B.C. propose sec. mod. school, Earlsheaton; infants' school, occupation centre and hostel for aged, Ravensthorpe; school dental clinic, Leeds-rd.; children's home, Orchard-st. Architect, R. R. Alexander, Town Hall.

Dudley.—T.C. propose 60 flats, 2-storey blocks of 2 and 4 units.

Durham.—C.C.'s plans for a primary school, Shotley Bridge, have been approved by M.E.

Fleetwood.—B.C. propose estate with 500 houses near sea wall.

Gateshead.—Plans have been approved by T.C. for six houses, Firwood-gdns., Lobley Hill, for A. E. Raine and others. T.C. received sanction to borrow £80,394 for a county junior school, Lobley Hill. M.H. approved sketch plans for proposed shopping centre, Beacon Lough.

Hexham.—R.D.C. has been allocated 50 houses for this year and these will be built at Acomb (20), Haydon Bridge (18), and Newborough (7). Five houses are to be allocated to private builders.

Heywood.—B.C. propose maisonettes, Heap Bridge. Boro' S., P. Middleton.

Hiraethog. — R.D.C. propose 22 houses, Llanrwst. Plans by surveyor, G. R. Hughes.

Huddersfield.—West Riding C.C. recommended to approve alterations and adaptations at "Banney Royd," Halifax-rd., to provide suitable accommodation for fire service H.Q., at £15,165.

Hull.—Sir Thomas Bennett, F.R.I.B.A., 43, Bloomsbury-sq., London, W.C.1, is architect for rebuilding store of Hammonds, Ltd., at £400,000.

Hyde.—B.C. approved plans for:—Extensions to works, Frances-st. West, for Smith Bros.; storage building and new offices, Talbot-rd., for I.C.I., Ltd.

Jarrow.—Licence has been issued by M.O.W. for factory BT.19/15X on Bede Estate for North-Eastern Trading Estates, Ltd., Gateshead, at £58,245.

Keighley.—T.C. approved 48 2-bedroomed and 26 3-bedroomed houses, Brader Bank estate. E. A. Felgate, City A.

Lancs.—E.C. approved revised plan for school clinic, Droylsden, at £9,430; propose prim. school, Limehurst, Oldham. Plans by Oldham Boro' A.

Lancs.—C.C. to seek loan of £1,024,440 for 667 police houses, 46 offices and 180 garages for police purposes. G. Noel Hill, F.R.I.B.A., County A.

Lancaster.—T.C. received approval for 76 houses.

Littleborough.—U.D.C. to support proposal by Fothergill & Harvey, Ltd., to form housing society for erection of 13 houses, New Barn, Blackstone Edge-la.

Longbenton.—Architect for proposed ice rink, Four-la. Ends, for Mr. G. Powell, of Jesmond, Newcastle-on-Tyne, estimated to cost £300,000 is C. S. Errington, 46, Grainger-st., Newcastle-on-Tyne.

Macclesfield.—T.C. recommend site at Thomas-st. to Cheshire C.C. for erection of fire station.

Macclesfield.—C.O.E. Authorities propose one form entry school., Ivy-rd. estate.

Maghull.—Managers of St. George's R.C. School propose new infant and junior school.

Manchester.—E.C. seek loan of £15,415, for Charlestown Infants' school, nursery class section; £11,400 for restoration of war-damage, Lancasterian Special School; £17,771 for cost of other buildings and additions to site, St. Joseph's R.C. School, Longsight. City A. has prepared plans for adapting blitzed premises, 80, Mosley-st. and 77, Princess-st. as office accommodation; propose 112 "No Fines" houses (Scheme No. 90), Woodhouse Park neighbourhood, Northern Etchells, also 135 houses and 24 cottage-flats (Scheme No. 91); 19 aged persons' bungalows, Millbrook-rd., and 23, Greenbrow-rd., both at Newall Green, Baguley; 102 houses and 16 cottage-flats, Bank House Farm estate, Blackley; rebuilding of Free Trade Hall (Stage 2—superstructure); surveyor to make preliminary report on proposed scheme for redevelopment of Smithfield Market; seek Government authority to proceed with scheme for City abattoir, wholesale meat market, cold stores and cattle market. Surveyor to report on possibilities of extending city exhibition hall.

Manchester.—Management of "Manchester Hippodrome" propose extensions.

Mansfield Woodhouse.—U.D.C. approved plans for infants' school and nursery, Coxs-la., for Notts E.C.

Market Drayton.—U.D.C. propose conversion of hutments, Manor Farm Camp, Childs Ercall, into dwellings for 50 families.

Matlock.—U.D.C. propose 60 houses, Hurst Farm estate.

Middlesbrough.—Garbutt, Archibald & Archibald, 23, Albert-rd., Middlesbrough, are architects for offices, corner of Stockton-st., Acklam-st. and Depot-rd., for McNays, Ltd., engineers, 18, Stockton-st., Middlesbrough, and also for rebuilding shops and flats, South-st., for Bazires (1948), Ltd. Teesside Bridge & Engineering Works, Ltd., are planning erection of a foundry, Gasworks-rd., North Ormesby, and have prepared their own plans. W. J. Lowcock, Ltd., mineral water mfrs., Greta-st., Middlesbrough, are to erect commercial garage between Farrer-st. and Benjamin-st. to plans by Garbutt, Archibald & Archibald, 23, Albert-rd., Middlesbrough. Rev. B. Newsham, Sycamour-rd., Middlesbrough, proposes new vicarage, Farndale-rd., and architects are Garbutt, Archibald & Archibald, 23, Albert-rd., Middlesbrough. Kitching & Co., 21, Albert-rd., Middlesbrough, are architects for alterations to shop in Newport-rd., for Sams Extension, Ltd. J. A. Kenyon, Boro' E., has prepared plans for extending offices, Parliament-rd. 'bus depot, for T.C. T. Crawford, Borough-rd., Middlesbrough, has prepared plans for shop alterations, North Armesby-rd., for W. K. Evans. Alterations are proposed to store, South House, Dundas-st., for Dickson & Benson, Ltd., drapers, etc., and architects are Hetherington & Wilson, County-chbrs., 52, Westgate-rd., Newcastle-on-Tyne.

Middlesbrough.—Extensions are proposed to St. Joseph's R.C. prim. school. T.C. intends engaging consultants to prepare plans and specifications for new ambulance station.

Morpeth.—Plans by County A., W. W. Tasker, County Hall, Newcastle-on-Tyne, are being prepared for a primary school, Hobshill.

Newcastle-on-Tyne.—Ed. Com. have appointed G. H. Gray, Camden-st., North Shields, as architect of one of their proposed new schools.

Newcastle-on-Tyne. — Licensing Magistrates have approved application by James Deuchar, Ltd., 7, Eldon-sq., Newcastle, for erection of licensed premises, junction of Lonsdale-ter. and Lyndhurst-ave.

Newcastle-on-Tyne.—P. L. Browne & Son and Harding, Pearl-bldgs., Newcastle, are architects for a new school to be built by Newcastle-on-Tyne. E. Com.

Newcastle-on-Tyne.—Sir R. MacAlpine & Sons (Newcastle), Ltd., civil engineering contractors, Carliel House, Newcastle, are to convert Star-bldgs. into offices. City A. (G. Kenyon), 18, Cloth Market, Newcastle, has prepared plans for converting premises, Merley-rd., into ambulance station for C.C. Plans have been prepared by C. S. Errington, 46, Grainger-st., Newcastle, for warehouse, Bottle House-st., for Short & Sons. C. Solomon, 3, St. Mary's-pl., Newcastle, is architect for warehouse, Blenheim-st., for N. Baker. Marshall & Tweedy, 36, Blackett-st., Newcastle, are architects for shop and showroom, 49-53, Northumberland-st., for Barratt & Co., shoe manufacturers. Governors of Royal Victoria Infirmary, Newcastle, are to convert Nos. 5 and 26, Claremont-pl. and No. 2, Framlington-pl. into nurses' hostels. Infirmary authorities have prepared own plans.

New Forest.—R.D.C. recommends that the allocation of 165 houses for this year should include: 68, Rumbridge Farm, Totton; 54, Blackfield; 22, Fathers Field, Brockenhurst; 10, Sway; 8, East Boldre; and 3, Minstead.

North Riding.—A £10,000 scheme has been approved by E.C. for converting Brompton Hall, nr. Scarborough, into school for subnormal children. A site of two acres is being acquired for new R.C. infants' school.

Northumberland.—Plans are to be considered by C.C. for old people's homes, Tweedmouth, Berwick. County A., W. W. Tasker, County Hall, Newcastle-on-Tyne.

Oakengates.—U.D.C. propose further 50 houses. Plans by surveyor, M. S. Lee.

Prudhoe-on-Tyne.—U.D.C. is investigating possibility of building an aged people's hostel. U.D.C.'s architect, J. M. Angus, Hanover-sq., Newcastle-on-Tyne.

Salford.—T.C. propose 'bus station, Cross-la.; public building for religious and social purposes, Hanover-sq.; extensions to Broughton High School.

Seaton Valley.—U.D.C. to build ten old people's houses, Blyth-st. extension, at £8,893. T. W. Burgess, Council Offices, Seaton Delaval, is surveyor.

Settle.—R.D.C. to invite tenders for 10 houses, High Bentham; eight, Horton-in-Ribblesdale; eight, Long Preston; and three, Rathmell.

Shifnal.—R.D.C. propose houses: 26, Curriers-la., Shifnal; 18, Albrighton; and 10 bungalows, Shifnal.

Southport.—T.C. recommended to approve erection of hosiery factory at Crossens, for Hartwood Hosiery Co., Ltd.

Stafford.—R.D.C. to erect 28 houses, Gnosall; 6, Brocton; and 6, Seighford. Surveyor, G. M. Lawton.

Stalybridge.—B.C. approved plans for shower baths, wash room, urinals and w.c's at gas works, for N.W. Gas Board; lay-out plans for 59 houses, Hague Estate, St. George's site. Architects, Howard & Benson, 88, Mosley-st., Manchester.

Stanley (Co. Durham).—Newcastle Breweries, Ltd., Haymarket, Newcastle, are to carry out alterations to "Board Inn," Shield-row, to plans by F. T. Blumberg, Board's staff architect. Plans are still under consideration for pithead baths, Beamish Mary Pit, for Miners' Welfare Commission (Division Office, Queen's-sq., Newcastle-on-Tyne). U.D.C. propose 50 houses by contract. Plans have been approved for police houses, South Moor, for Durham C.C. (plans by County A., Court-la., Durham).

Stockton-on-Tees.—T.C. has been allocated 335 houses this year, of which 50 will be erected by direct labour.

Stockton-on-Tees.—T.C. has applied to M.H. for permission to build crematorium, at £30,000, near Durham-rd. Plans by Boro' A., 28, The Square, Stockton. No contracts let.

Stretford.—B.C. to invite tenders for flats and houses, Moss Park site; approved plans for:—extensions, Chester-rd., for Sterling Varnish Co., Ltd.; evaporation plant building, Westinghouse-rd., for Redpath Brown & Co., Ltd.; Sunday school, Henrietta-st., for Manchester (Old Trafford) Christadelphia Ecclesia.

Stretford.—B.C. approved lay-out for 34 houses, one block of two-storey flats and three blocks of three-storey flats, Christie-rd. site; submitted revised plans for proposed Old Trafford Baths to M.H.

Sunderland.—J. Potts & Son, 57, John-st., Sunderland, have prepared plans for partial rebuilding of shops, New Arcade, St. Thomas st. C.W.S. Architects' Dept., 90, Westmorland-rd., Newcastle, have prepared plans for proposed shops and house, Regent-ter. and Ryhope-rd. Plans have been prepared by W. & T. R. Milburn, 17, Fawcett-st., Sunderland, for rebuilding shop premises, Fawcett-st., West. Matkin & Hawkins, Barclays Bank-chbrs., Fawcett-st., Sunderland, have prepared plans for café alterations, Holmside. Alterations and additions to be carried out to offices and 28-29, John-st. to plans by G. T. Brown & Son, 51, Fawcett-st., Sunderland. E.C. to proceed with additions to Sunderland Tech. College to plans by G. T. Brown & Son, 51, Fawcett-st., Sunderland, tenders are being obtained.

Sunderland.—T.C. has approved scheme for a hostel to cost £19,000. Plans by Boro' A., J. Murray, Grange House, Stockton-rd., Sunderland.

Tettenhall.—U.D.C. propose further 40 houses. Plans by surveyor, J. W. Mason.

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Todmorden.—Boro' S. to prepare plans for 2-storey flats, Harley Wood, and 3-storey flats, Stansfield Mill and Shade sites.

Tyldesley.—U.D.C. propose further 24 houses, Shakerley estate. Surveyor, D. Urwin.

Tynemouth.—Boro' E. has prepared plans for gymnasium and staff room, Tynemouth High School.

Upholland.—U.D.C. received M.H. approval to layout of 24 houses, Highgate estate. Architect, J. M. Gornall.

Wakefield.—Corporation propose erecting college on six-acre site, Thornes Park, adjoining Horbury-rd., on long-term basis.

Wallsend.—Extensions are to be made to public baths. Architects, P. L. Browne, Son & Harding, Pearl-bldgs., Newcastle.

Warwickshire.—C.C. propose expenditure of £9,800 for repairs to Institute of Agriculture, Moreton Morrell. County A., E. H. Elkins.

West Hartlepool.—R. H. Duns, 6, Lambton-rd., Jesmond, Newcastle-on-Tyne, has been appointed quantity surveyor by E.C. for proposed Rift House County Prim. School. S. M. Richmond, Municipal-bldgs., West Hartlepool, is Boro' A.

West Hartlepool.—Bakery alterations are proposed, Villiers-st., for Jobson & Son, Ltd. Hartlepool Co-op. Society, Ltd., are to carry out alterations to shop, 122, Stockton-rd. Durham C.C. are seeking sites on Owton Manor Estate for four police houses. T.C. has approved in principle a scheme for a permanent occupational centre, Brenda-rd. site, at £7,000. M.E. has approved in principle E.C.'s plans for proposed new Rossmere County Prim. School, Owton Manor area, and steps are being taken to acquire site.

Wigan.—Watch Com. approved houses: Six, Beech Hill-la., at £7,728; eight, Springfield-rd., at £10,444; five, Northumberland-st., at £6,908; six, Smethurst-la., at £7,595.

TENDERS

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modification*.
¶ Denotes *accepted by H.M. Government Departments*.

Barnstaple.—Erection of North Devon technical college (first stage): *J. Dennis & Son, Knowle, Braunton, N. Devon, £113,134.

Bexley (Kent).—Baptist church at Dartford-rd., Baldwyn's Park, for Rev. J. Dunlop Gebbie, 28, King Edward-ave., Dartford. J. Stirling Boyd (L.), 84, Hill-cres., Bexley: *Prefabricated Constructions, Ltd., 11, Upper Grosvenor-st., London, W.1.

Billingham-on-Tees. — Additions to school clinic and child welfare centre, for Durham County E.C.: *Cowan & Son, Ltd., Skinner-st., Stockton-on-Tees, £5,146 (in lieu of tender withdrawn).

Birmingham.—Additional accommodation at Kingsvale nursery school, for E.C.: *J. F. Wootton, Ltd., Pinfold, Bloxwich, £3,158.

Bolton.—Adaptation of premises, Castle-st., as social centre for blind: *Gilbert Collier & Son, Ltd.; adaptation of Egerton Lodge as hostel for aged: *F. Hutchinson & Senior.

Bolton.—Extensive alterations and rebuilding of "Pack Horse Hotel." Architects, T. E. Smith & Sons, Central-chbrs., Fold-st., Bolton: *Wm. Townson & Sons, Ltd., Park Hill-st., Bolton.

Bramley.—Canteen for the Goldburn Manufacturing Co., Bramley. Architects, Stephenson & Gillis, Saville-chbrs., Newcastle-on-Tyne: *W. T. Pearson, Sheeps Scar, Leeds.

Dagenham.—18 lock-up garages on two sites, for B.C.: *S. Wright, 42, Aldborough-rd., Dagenham.

Doncaster.—Erection of pumping station at Wilby Carr Farm, Cantley, for T.C.: *Walter Firth, Ltd., Doncaster, £16,575.

Dudley Training College Council.—Kitchen and dining-room block at College. A. C. H. Stillman (F.), architect and surveyor, County Education Offices, Earl-st., Stafford: *Cummings (Builders), Ltd., 18, Abbey-cres., Warley, Birmingham 32, £10,555.

Durham.—Erection of temporary classrooms at Billingham south county and modern schools, for county E.C. G. R. Clayton, County A., Court-la., Durham: *Thornton Construction Co., Ltd., Stockton-on-Tees, £4,000.

Eye.—Erection of junior and infants' school on site in Eyebury-rd., for Peterborough joint education board. Architect, J. G. Warwick (F.), 43a, Priestgate, Peterborough: *Bettles Building Co., Ltd., 2, Waterloo-rd., Peterborough.

Forres.—New classrooms at The Academy. J. White, County A., Council Offices, Elgin. *James Crow & Sons, West End, Edinburgh.

Gateshead.—Erection of 70 houses and eight flats on the Lyndhurst estate, and 14 houses and 12 flats at the Fanny pit site, for T.C. H. J. Cook, chief architect, Municipal-bldgs., Gateshead: *A. V. Clerey & Sons, Frederick-st., Sunderland.

Glasgow.—Omnibus garage at Aitkenhead-rd., Gashetfaulds. Mr. E. R. Fitzpayne, B.Sc., General Manager, Transport Offices, Bath-st., Glasgow, W.C.2. W. Dinsmore & Son, quantity surveyors, The Chambers, 102, Bath-st., Glasgow, W.C.2. *William Taylor & Sons (Glasgow), Ltd., Bridgeton, Glasgow.

Glasgow.—Factory buildings for the Scottish Industrial Estates, Woodside-cres., West End, Glasgow, at the Queenslie Industrial Estate. George A. Bosvile & Partners, 256, West George-st., Blythswood-sq., Glasgow, architects. *Thaw & Campbell, Ltd., Bridgeton, Glasgow.

Glasgow.—Kitchen at Clydeferry-st. public sch.: Architect is John MacNab, 129, Bath-st., Glasgow, W.C.2: *L. K. MacKenzie & Partners, Glasgow, £9,649.

Jarrow-on-Tyne.—Erection of eight houses and 15 old people's houses on South Leam-la., for T.C. H. W. T. Perkins, B.E.: *Direct Labour.

Keighley.—26 bungalows at Brader Bank estate, for T.C.: *E. Turner, Ltd., Bradford-st., Keighley, £20,276.

London.—Reinstatement of Duke's Court, Duke-st., and 77-79, Jermyn-st., St. James, S.W.1: *Foven Construction Co., Ltd., St. Mary Cray and Dartford.

London.—Reinstatement of 109, Middlesex-st., E.1: *Foven Construction Co., Ltd., St. Mary Cray and Dartford.

L.C.C.—Contracts exceeding £2,500 in value placed by L.C.C. during period ended February 14.

The supply and erection of sawn oak pale fencing at Oxhey, Hertfordshire, W. H. Skinner & Co., Ltd., City Wharf, Long Ditton, Surrey; construction of blocks 1 to 7 and other works at Coventry Cross estate, Poplar, Kent & Sussex Contractors, Ltd., 109, Station-rd., Sidcup, Kent; installation of wiring and fittings for electric lighting in 345 dwellings at Downham estate, Lewisham, London Electricity Board (Southern Sub-Area), 181-185, Lewisham High-st., S.E.13; war damage repairs at Broadwater School, Balham and Tooting. Siggs & Chapman, Ltd.; alterations and improvements at Acmar-rd. School, Fulham. J. M. Hill & Sons, Ltd.; erection of Denmark-hill and Kingswood-drive primary schools, Kent & Sussex Contractors, Ltd., 109, Station-rd., Sidcup, Kent; alterations and improvements at Essendine School, Paddington, W. H. Cooper & Son, Ltd., Latymer Works, 201, Hammersmith-rd., W.6; reinstatement of the food production area at Hainault Forest, " En-Tout-Cas " Co., Ltd., Leicester.

¶London (Air Ministry).—Contracts to value of £500 or over for week ended February 4:—

Building work: G. & J. Seddon, Ltd., Little Hulton, Bolton, Lancs; R. Corben & Son, Ltd., West Borough, Maidstone, Kent. *Painting work*: Clark & Fenn, Ltd., Clapham, London, S.W.4; C. J. Else & Co., Ltd., Matlock, Derbyshire. *Erection of hutting*: G. Mead, Pinner, Middlesex; Woodcock Marshall & Co., London, W.11; S. H. Leach, Ltd., Twickenham, Middlesex.

¶London (Air Ministry).—Contracts to value of £500 or over for week ended February 11. *Civil engineering work*: Geo. Wimpey & Co., Ltd., London, W.6. *Building work*: Fisher & Sons (Fakenham), Ltd., Fakenham, Norfolk. *Erection of fencing*: Boulton & Paul, Ltd., Norwich. *Conversion of buildings*: Haymills (Contractors), Ltd., London, W.5. *Painting work*: T. Metcalfe & Sons, Ltd., Darlington. *General maintenance work*: F. W. Honour & Sons, Ltd., East Grinstead, Sussex.

¶London (M.O.W.).—Contracts placed by M.O.W. for week ended February 4:—

London: Mount Pleasant sorting office, E.C.1, Internal painting, Clark & Fenn, Ltd., 16, Old Town, S.W.4; R.A.F. Reserve Centre, 77, Hallam-st., W.1, Internal decorating, C. & T. Painters, Mordaunt-rd., N.W.10; P.O. Editorial Section, 171-3, Aldersgate-st., E.C.1, Occupational services, A. Roberts & Co., Ltd., 79, Eccleston-sq., S.W.1; Croyland-rd. School, N.9, Erection of temporary school buildings, T. W. Rodgers & Sons, Ltd., 135a, High-st., Barnet, Herts; Adastral House, Kingsway, War damage repairs and decorations to blocks B and C, Marshall Andrew & Co., Ltd., 31, Queen Anne's-gate, St. James's Park, S.W.1; M/S Red Barracks, Woolwich, Reconditioning of four north spurs, Henry Kent (Builders), Ltd., 51, Beacon-rd., Lewisham.

Hampshire: R. A. E. Farnborough, Sundry works, construction of water tank, Lavender McMillan, 54, Cheam Common-rd., Worcester Park. *Lancashire*: Lydiate, Erection of unattended auto T.E., E. H. Bampton, Ltd., Blackmoss-la., Aughton Park, Ormskirk.

¶London (War Dept.).—Works contracts placed by War Dept. for week ended January 28. *Yorks*: Building work, R. Blackett & Son, Ltd., Darlington. *Cornwall*: Miscellaneous work, Wm. Sanders & Son, South Molton. *Warwickshire*: Building work, J. H. Woodward (Contractors), Ltd., Leamington Spa. *Salop*: Miscellaneous work, R. A. Buckle, Ltd., Prestatyn. *West Lothian*: Civil engineering, Scottish Tarmacadam & Asphalte Co., Ltd., Glasgow. *Co. Down*: Building work, Thos. Lindsay & Sons, Belfast. *Perthshire*: Partitioning work, Ayrshire Dockyard Co., Ltd., Irvine.

¶London (War Dept.).—Works contracts placed by War Dept. for week ended February 4: *Devon*: Building work, Woodman & Son (Builders), Ltd., Exeter. *Surrey*: Playing field construction, Surface Maintenance Services, Ltd., Bournemouth. *Wilts*: Conversion of cooking equipment, F. W. Hulbert Light & Co., Ltd., Chippenham. *Cambs*: Roadwork, William Sindall, Cambridge. *Beds*: Miscellaneous work, S. T. Harvey & Co., Ltd., Luton. *Yorks*: Building work, Gibson Bros. (Upton), Ltd., Upton, nr. Pontefract. *Lancs*: Building work, Arnold Ingham & Son, St. Annes-on-Sea.

Manchester.—Regional Hospital Board. (a) Conversion of scarlet fever block to chest clinic at Barrow and Furness Devonshire-rd. isolation hospital: *Nicholson & Wright, Ltd., Lancaster; (b) Verandahs and solariums to E.M.S. Wards at Withington hospital. Plans by F. Bradley, Wood-st., Bolton: *J. W. Lee, Ltd., Chorley.

Manchester.—Additional classrooms at Lily-la. school, for E.C.: *G. Fisher (Fallowfield), Ltd.

Mansfield.—Houses for B.C. Six and four, *Thos. Smith & Sons (Mansfield), Ltd., £7,917 and £5,399; four, *Mr. G. Day, £5,390; six, *J. E. Baggaley & Son, £8,103; six, *Mr. R. A. Ashley, £7,884; six, *Mr. J. A. Wilson, £8,100.

Matlock.—30 "Unity" houses for U.D.C.: *W. Wildgoose & Sons, Ltd., £41,997.

Middlesbrough.—26 houses in Ullswater-ave., Ambleside-gr. and Langdale-gr.: *Dean Brothers, Longlands-rd., Middlesbrough.

Middlesbrough.—Erection of infants' department, meals block, caretaker's house, etc., at the Thorntree No. 1 county primary school, for the E.C. T. R. Middleton, education architect, Woodlands-rd., Middlesbrough: *Arthur Robinson (Contractors), Ltd., 423, Linthorpe-rd., Middlesbrough, £68,295.

Middlesbrough.—Erection of 30 permanent houses in Cumberland-rd., for T.C. B.E., J. A. Kenyon: *Middlesbrough & District Building Trades Association, £38,350.

Middlesbrough.—Erection of 78 houses in Cumberland-rd., for T.C. B.E., J. A. Kenyon: *J. Oakley, Valley-rd., Middlesbrough, 12 houses; *J. Cresswell, Baxter-st., Middlesbrough, 12; *Taylor & Son, Brentnall-st., Middlesbrough, 12; *Sweeting & Partner, Eastbourne-rd., Middlesbrough, 10; *L. Conolly, Middlesbrough, 10; *G. Wilmhurst, Gipsey-la., Middlesbrough, 10; and *J. W. Emmerson, Thornton-st., Middlesbrough, 12.

Middlesbrough.—Erection of 74 houses on Beechwood site, for T.C. B.E., J. A. Kenyon: *Direct Labour, £90,808.

Newcastle-on-Tyne.—Extensions to Henderson Hall, Cochrane Park, for the Council of King's College. Architects, Mauchlen and Weightman, Saville-row, Newcastle-on-Tyne: *J. R. Rutherford & Sons, Jesmond, Newcastle-on-Tyne.

Newcastle-on-Tyne.—Erection of six police houses, for C.C. G. Kenyon, City A., 18, Cloth-market, Newcastle. Two houses: *Sadler & Robinson, Budle-st., Newcastle; four houses: *C. S. Hogg, Ltd., Newcastle.

Newcastle-on-Tyne. — Conversion of Dial House, Northumberland-st., Newcastle-on-Tyne, into offices, for Shell-Mex, Ltd. Plans by the Shell-Mex Staff, London: *Stephen Easten, Ltd., Westgate Grange, Newcastle.

Newcastle-on-Tyne.—Conversion of buildings in City-rd., Newcastle-on-Tyne, into a dental

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and medical clinic. Plans by G. Kenyon, City A., 18, Cloth-market, Newcastle: *R. S. Appleby & Co., 15, Trafalgar-st., Newcastle.

Northwich.—Alterations and additions at Central library. Witton-st., for U.D.C.: *F. W. Burrows, 140, Witton-st., Northwich, £3,429.

Nuneaton.—Houses for T.C. Six at Vernonsla.: *A. E. Simpson, 84, Ashton-rd., £7,811; two at Blackstree-rd.: *James Mills, Watling-st., £2,704; six at Kingsbridge-rd.: *Simpson & Twitty, £7,631; four at Brading-rd.: *J. O. Avery, 8, Astben-st., £5,107; four at Green-la.: *A. Wills, £5,107.

Oldham.—116 houses at Limeside estate, for B.C.: *A. Cassel & Sons, Ltd., 1-3, Teneriffe-st., Salford.

Ottery St. Mary.—Adaptation of the Priory for sectional police H.Q., etc.: *Mr. H. E. Hansford, King-st., Honiton, Devon, £6,303.

Perthshire and Clackmannan.—New classrooms at Crieff Publicity School for C.C. John Penman (F.), County A., County-bldgs., York-pl., Perth. *P. Graham & Sons, Bankfoot, Perth.

Salford.—Extensions to Height Public Hall: *Direct Labour; extensions, Greenbank nursery: *G. Fisher (Fallowfield), Ltd., £6,163.

Southport.—Four houses and four flats at Rufford-rd. No. 2 site, for T.C.: *Rostron & Sons, £8,665.

Southwark.—Erection of single-storey block of offices, for the Road Haulage Executive, under the supervision of E. A. Gadd, F.R.I.C.S., Divisional Surveyor: *H. L. Bird, Ltd., Hainault st., Ilford, Essex, £5,000.

Spalding, Lincs.—Houses for R.D.C. 26 "Wates" at Crowland: *G. Calverley & Sons (Contractors), Ltd., Evington Valley-rd., Leicester; 34 houses at Crowland estate: *Drury & Co., Ltd., Wigston, Leicester.

Staffs.—Completion of premises at Biddulph Knypersley Girls' County Secondary Modern School, for C.C. A. C. H. Stillman (F.), Architect and S.: *G. H. Key & Co., Ltd., 7, Crossway-rd., Sneyd Green, Burslem, Staffs. £26,907.

Staffs. — County primary school at Walton estate, Stone, for C.C. A. C. H. Stillman (F.), Architect and S.: *B. D. N. Tate & Co. (Builders), Ltd., Raglan-st., Wolverhampton, £53,670.

Stanley (Co. Durham).—Erection of 18 "Orlit" houses on the South Stanley housing site, for U.D.C. J. R. Heslop, S., Council offices, Stanley: *Tarslag, Ltd., Stockton-on-Tees, £24,130.

Tarvin.—Houses for R.D.C. Four at Duddon site: *A. Langford & Son, £4,744; six at Hockenhull-av.: *T. H. Lightfoot & Son, £7,038; six at Gongar-la., Ashton: *T. Nixon & Sons, £7,042. (All of Tarvin.)

Tynemouth.—Bakery in Waterville-rd., Tynemouth, for Puroh Bakeries Ltd., Newcastle. Architects, G. H. Gray, Camden-st., North Shields: *Hastie D. Burton, Ltd., King-st., North Shields.

Wakefield.—Houses for T.C. at Eastmoor estate extension: *West & Sons (Leeds), Ltd., 34, Lincoln-rd., Leeds 9 (14); *Searby Bros., Oakenshaw, Crofton, Wakefield (six).

Wallasey.—Houses for B.C.: *Wm. Thornton & Sons, Ltd., 38, Wellington-rd., Liverpool, £51,723 (42); *J. H. Waring, Barrowdale-rd., Moreton, £19,879 (16); *J. L. Rawsthorne & Co., Edwards-la., £19,211 (16); *H. G. B. Construction Co. (Liverpool), Ltd., Moreton, £15,737 (12); *J. Tate & Sons, Wallasey Village, £13,576 (12); *J. L. Leach & Co., 433, Leasowe-rd., £11,506 (10); *W. Bradshaw (Contractors), Ltd., £12,463 (10); *C. G. Davies & Son, Moreton, £4,449 (4).

Wem.—Further 10 houses at Grove site: *Grindalls, Wem (extension to contract).

West Hartlepool.—The T.C. has allocated the erection of houses as follows among local builders. S. M. Richmond, Borough Architect: Taylor & Evans, 20; T. A. Young, 12; W. Brazell (West Hartlepool), Ltd., 8; J. Longmore, 4; Spalding & Snaith, 4; John Proud, Ltd., 26; C. M. Yuill, Ltd., 24; J. Hogarth, 4; J. Peel, 4; W. W. Brazell, Ltd., 18; Watt Bros. (Builders), Ltd., 16; F. M. Gibbon, 12; T. M. Stonehouse, Ltd., 16; W. Pearson & Sons, 2; and direct labour, 10.

Willenhall.—Erection of 50 houses at Beacon Colliery estate, for U.D.C.: *Mr. H. Taylor, £60,818.

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